







Otto Tachenius.
his
Hippocrates Chymicus
Discovering
The Ancient foundation of
the late Viperine Salt
with his Clavis *thereunto*
annexed
Translated by I. W.

London *Printed & are to be sold by*
Nath: Crouch at the George at the
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OTTO TACHENIUS
HIS ~~XIII. 15. 55~~

Hippocrates Chymicus,
WHICH K. 5. 65-1

Discovers the Ancient Foundations of the late Viperine

SALT.
AND HIS

CLAVIS
THEREUNTO.

Translated into ENGLISH *by* J. Wards

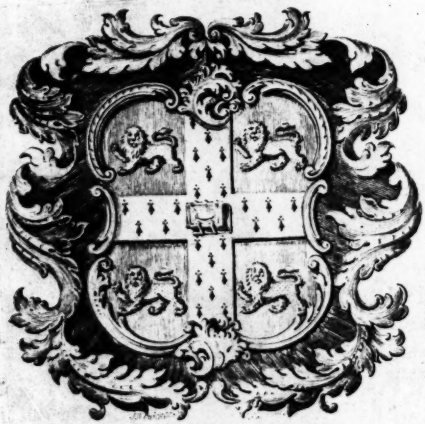
Me Legat invitus nemo, non scripsimus illi,
Huic scripta est, siquem Pagina nostra juvat.

Avant ye Unwilling Ones, to those I Write,
And those alone, who in my Lines Delight.

SITY
RARY
BRIDGE

Licensed Aug. 30. 1676. Roger L'Estrange.

LONDON,
Printed for *Thomas James*, and are to be Sold by *Nath. Crouch* in *Exchange-Alley* over against the *Royal Exchange* in *Corn-Hill*, 1677.



Academiæ Cantabrigiensis
Liber.

ov ... 303

THE TRANSLATOR TO THE READER.

THe Author of theſe Enſuing Diſcourſes, who is, as 'tis hoped, yet Living at *Venice*, hath his Name in an high degree of Merit amongſt the Prime Phyſicians and Chymiſts of this Age; His knowledge in the *Spagyrical* Art (in the judgement of thoſe Emunct and Sagacious perſons, who have Studied the Controverſie betwixt Them) far exceeding *That* of *Zwelfer*, his Antagoniſt; who during this whole Treatiſe, goes under the name of the *Reformer*, for the reaſon mentioned p. 2. The Tranſlation it Self was not performed without Labour and Sweat, partly becauſe the Editions which were made uſe of, one from *Brunſwick*, the other from *Leyden*, were very unperfect and incorrect; partly alſo, becauſe, The Author being more intent on *Matter* than *Words*, on *Things* than *Expreſſions* ('tis his own Apology, p. 4.) doth ſometimes leave his Senſe to be picked out by the Analogy of his Doctrine. If moroſe and ſupercilious Cenſurers ſhall object Impoliteneſs, Soleciſme, Inept Cadencys and Cohæſions of Words and Sentences; Obſcurities, length of Parentheſes's

ſes's, and other flawes uſually incident, or at leaſt imputed to Tranſlations: In bar to ſuch Hypercriticks, I offer the particulars following, *viz.* *That* every Language hath its *Idiom*, which is not properly transferrable to another; *That* a *Tranſlator* is no *Paraphraſt*, but being limited to the *Senſe*, and in great part confined to the *Words* of his Author, hath no allowable Liberty to make Excurſions, or to add any explanatory Embelliſhments to another Man's *Work*: It is *his* Province to write by the Copy before him (*i. e.*) to Veſtigate and Overtake the Author's Senſe, and faithfully to render it; which I hope is here, not unhappily performed; As for the *Obſcurity* objected, The *Doctrine* it ſelf muſt bear part of the *Guilt* (if any be) For *That* being *Novel*, or at leaſt retrived from Antiquity, may not perhaps be ſo clearly and Apodictically explained in a *Compendium* (which the Author intimates more than once) as to ſtop the Mouths of all Gain-ſayers, though plainly enough (eſpecially with the addition of the *Clavis*) to ſatisfie the Reaſons, and convince the Judgements of Candid and Ingenious Readers. Laſtly, Since 'tis an eaſie thing to be Witty in another Man's Labour, I ſhall conclude with the Poet,

Carpere vel noli noſtra, vel ede Tua.

J. W.

THE

THE PUBLISHER TO THE READER.

THis Book, as to the *Tranſlation* of it, hath been ſufficiently peruſed, juſtified, and approved by ſome of the moſt learned and experienced Chymiſts in and about this City: As to *the Matter* of it, it needs no other Commendation than the long ſince allowed and printed Obſervation and Approbation of the *Royal Society of England*, in theſe words;

Philoſophical Tranſactions, Aug. 16. 1669. Num. 50. page 1019.

OTTONIS TACHENII Hippocrates Chymicus *Venetiis in* 12°.

THis *Author*, though Printed two or three years ago, came not to our Knowledge, till now: He in his *Tract* endeavours to juſtifie the Ancients blamed by *Zwelfer* in his *Pharmacopæa Auguſtana*, for having committed ſeveral Faults in the preparation of a certain *Salt* call'd

call'd *Theriacal*, because extracted out of *Vipers*, and diverse other Ingredients composing *Theriack*; and having done this, he thence takes occasion to Treat of the Nature of *Salts*, especially of *Alcalyes* and *Acids*, which he, with some other Chymists, hold to be the first Principles of all mixt Bodies: And being perswaded that *Hippocrates* was also of this opinion, and a great Chymist too, he Entitles His Book *Hippocrates Chymicus*.

Though the Salt *Alcaly* properly signifieth that Salt which is drawn out of the Ashes of an *Egyptian* Herb, named *Kaly*; yet Chymists take it in a larger Sense, and understand by that Word all the Salts, which, like that of the said Herb, draw and impregnate themselves with, *Acid* ones. To this Salt our Author refers almost all the Operations of Nature, and having examined its properties, relates divers, not Uncurious Observations concerning it.

For Example, That nothing pierceth so much as *Alcalyes*, and that therefore Nature hath stored the *Sweat* of Animals so plentifully with it, for that the Ordure which continually gathers on the Skin, would soon stop the pores of it, if the *Sweat* were not furnisht with some efficatious Dissolvent to open and pierce Them; Whence he observes, that the best liquored Boots, and such as are Water-proof, will be quickly pierced by the sweat of Horses; adding, that though Riding-post, he had, to avoid that inconvenience, rubbed his Boots with a *Vernice*, which resisted even to *Aqua Fortis*, yet the Sweat of the Horses he rode on dissolved that fence after the second day of his Voyage.

Next,

Next, He holds it to be ineffectual [illegible] of *Vitriol* for whitening the Teeth, Experience shewing that from the mixture of an *Alcaly* and *the Spirit of Vitriol*, there results a yellow; and that there is an *Alcaly*, continually transpiring out of the Gums, as out of all the other parts of the Body; whence it must follow that the *Spirit of Vitriol* employed to rub the Teeth, when mixt with that Salt, must tinge them of the same colour.

Then he affirms, that Wood *rotten* hath no *Alcaly* in it, and that it rots not, but upon the account of the exhaling of that Salt, Whence 'tis (*saith he*) That the *Venetians* to harden the Timber designed for building of Ships, sink it green in Water, and there leave it many years, which is the cause, That the *Alcaly* having been hindred from exhaling, the Timber rots not, but becomes as hard in a manner as *Stone*.

We cannot pretermit taking notice, That this Author finds occasion in this Book to explain the way by which the Famous *Turnheiser*, a *German* Chymist made that celebrated *Nail*, half Gold and half Iron; which is shewed at *Florence* in the Repository of the Great Duke of *Tuscany*. 'Tis said, that *That Chymist*, having in the presence of that *Prince*, immersed in a certain Oyl, the one half of a Nail which appeared to be all Iron, that part which touched the Oyl, was instantly found to be good Gold: Several persons having examined this *Nail*, and seeing the Gold and Iron, exceeding well conjoyned, were perswaded that it could not well be effected, but by a true change of one of those two Metals into the other; believing it impossible they could be So-

dered together. But the *Author* of this Book maketh that a very easie thing, if the Iron be before prepared after a certain manner, which He teacheth; and He pretends, That That was the whole Secret of *Turnheiser*, the rest being nothing but Illusion; for after he had by that means Sodered together a piece of Gold with half a Nail, He knew so well to give the colour of *Iron* to *Gold*, that Men believed that the whole Nail was of Iron; and having afterwards put this Nail into the Fire, and held it in the Oyl, to take off that colour, he made appear that *Gold*, which was hid before.

To

To the Most Serene and Mighty PRINCES,

The LORDS { *George William*, *John Frederick*, *Erneſt Auguſtus*, } Brethren.

By the Grace of GOD, DUKES of *Brunſwick* and *Lunenburg*, &c.

His Moſt Bounteous LORDS.

PO*ndring often in my Mind* (*High and Mighty Princes, and my Noble Patrons*) *the Great and many Favours which Your Grand and Princelike Liberality hath moſt Graciouſly heaped upon me, and thereby Eternally obliged me to Your Excellencies; I became ſolicitous and concerned in my thoughts, with what Veneration and Induſtry of Wit* (*anſwerable to the Obſequiouſneſs of my Devoted mind*) *I might declare by ſome Teſtimony, at leaſt, an endeavour of Gratitude for Your Benefits beſtowed upon me. 'Tis the guiſe of Others in Dedicating their Lucubrations to Princes and Nobles, chiefly to concern themſelves in Blazoning their* Genealogies, *and in Decyphering their Praiſes and Heroick Acts, in an high Method of Elegancy, thereby extolling them* (*as we ſay*) *with an open mouth to the Skies. But I* (*well knowing that the full-blown Elogies of Talkative Fame, do diſpleaſe Your* Excellencies, *eſpecially ſince glorious and memorable* Vertue *it ſelf, for ſo many Ages backward* (*together with Magnanimous Bounty*) *have flouriſhed in the moſt Auguſt Houſe of* Brunſwick and Lunenburg, *and by God's*

Blessing will ever flourish in the same) I, I say, waving therefore all such Proceedure do come only furnished with a gift not large, nor great (though you are worthy of both) nor glittering with Gold, Silver, or Precious Stones, Ornaments which (Divine Bounty hath aboundantly repleniſhed Your Highnesses withall, but) are denied to me, *and persons of my condition: Mine is only a Paper gift, but extracted from the true Protochymick Art, which is most Ancient, and hath more in the* Recess *than it promises in the* Front: *Yea it is That, by which the uncreated Spirit, the Founder of the World d d order and distinguish the (otherwise) confused Natures of things. Hereupon I perswaded my Self, that I could offer no gift more grateful to Your Highnesses, than a new work of this most Vetust, yet Wonderful and Necessary* Science. *A Work most curious in it self, which hitherto Envy hath forborne to restore, and to gratify the World with: For although the unconquerable* Truth *comes commended only by its own strength, and is sufficiently fortified by its proper and native Vigor (for nothing can subsist, which is not* firmed *in the very Foundation of Nature) and so enjoys this invincible Patronage; yet the plain Purity of my Writings being Dedicated to Your* Eminencies, *and thereby armed with so great Splendor, thus doubly strengthened, will appear more boldly in the sight of the World. Accept therefore (most Noble Princes) this Diminutive Gift for the bare* Title's *sake, and go on, if not entirely to love, yet somewhat to respect and favour,*

VENICE *the Ides of* May, 1666.

Your Highnesses most
Devoted Servant,

OTHO TACHENIUS.

THE

The PREFACE to the Courteous READER, And Lover of the Ancient Doctrine of HIPPOCRATES.

HIppocrates, *That bright-ſhining Light of Phyſick, did wrap up His Divine Oracles in* Ænigma's, *and with an Obſcure Brevity, related his Precepts in all the parts of his Works; So that his Inſtructions and Aphoriſmes, by reaſon of their Obſcurity, are wreſted by Writers into diverſe Senſes; ſome of which* Galen, *with wonderful Skill and comely Order, hath digeſted into* Chapters; *but otherſome, eſpecially the* Golden Book De Diætâ, *which is full of Myſteries, he hath left untouched. For the Divine Old-Man bequeathed* Thoſe *only to the followers of* Chymiſtry; *which* Art *was heretofore, and perhaps in* Hippocrates *his time, called* Natural Philoſophy. *For who can underſtand the rare ſayings of that Old-Man, or comprehend the* Soft Fire *mentioned by him, unleſs he be well verſed in this Occult Natural Philoſophy of* Hippocrates. Raimund Lully *gives his Atteſtation hereto; for, ſays he,* Though a Logician may have as profound Wit, acquired, or natural, able to argue concerning outward things, yet he can never underſtand by any Reaſon grounded on Senſe, how the Seed in the Earth doth germinate, increaſe, and brings forth Fruit, unleſs, being aſſiſted by experimental Learning, He firſt have made ſome progreſs in Our Natural Philoſophy, rather than in That Sophiſtical Wordy one, which Logicians do attain to, by ſundry Phantaſtical ſuppoſitions and preſumptions; who thereby, with the Prognoſtications of their ſequels againſt the force of Nature, do cauſe many Men pertinaciouſly to err, through an intoxicated Mind. But by our Mechancial Science, the Underſtanding is rectifyed in point of inſight, and of true Mental Knowledge, by the force of Experience: Yea, Our Experiments are ſuperior to all phantaſtical Probations of Concluſions, and therefore admit not of Them, but do ſhew the way how all other Sciences may enter vigorouſly into the Underſtanding. Whence we further learn by Nature, that In-

The Writings of the Ancients were like the Oracles of *Apollo*, Ænigmatical.

Teſtam. chap. 26

Inward thing, That it is, and What it is; because by such Science the Understanding is freed from those superfluities and errors, which do ordinarily carry it off from the Truth, by reason of those presumptions and prejudices which are believed in the Conclusions. Hence it is, that Our *Chymists* have directed themselves through the path of every Science, to enter into all Experience by Art, according to the course of Nature in her Univocal Principles. For 'tis only Chymistry, which is the Glass of the true Understanding, shewing it how to feel and see Truths in a clear light, and therefore *Tabula Smaragdina* saith, By this kind of demonstration all Obscurity is banished and expelled from Man, *&c.*

Lib. 1 de Dieta Hippocrates *points at the foundations of this most* Ancient Art, *in the beginning of his aforesaid Book.*

All other living Creatures, *says he*, as well as Man, are constituted of Two principles, different in faculty, but concording, and joyntly fit for Use, Fire and Water: Both of These together, are sufficient both for all other things, and also for themselves mutually; but either of them severally and a-part, is sufficient neither for it self, or any other, *&c.*

It is my purpose in this *short* Tract, *to expose to View those two, hitherto* Obscure *Principles, to wit.* This soft Fire *and* Coagulable Water, *only out of a desire to propagate Truth; which in this Age is wofully kept under by the Haters of Hippocratical Learning; not that I think it possible for any Men wholly to extinguish* it, *In regard it is Powerful, Impregnable, and Triumphant above all things in the whole World, as Holy Writ also testifies; For* Zorobabel *says*, 3 *Esdr. c.* 3 *&* 4. Wine is strong, The King is stronger, Women strongest, but above all things, Truth beareth away the Victory; all the Earth calleth upon Truth; The Heaven praiseth it, it is always strong, it conquereth and liveth for evermore, *&c.*

Obj. *I know many men according to the variety of their Dispositions, will diversly censure me, for publishing That which Nature hath decreed to manifest only to* Philosophers; *and Those too, tugging hard after it, by Labour and Study.*

Theor. c. 1. *For, says* Raimund, Nature, my Lady and Mistress ap-

appeared to me, and with Tears in her Eyes, bespake me thus; Alas! what shall I now do? endeavours are on foot to take away my Weapons and Instruments from me, and to plunder and discover my Secrets, &c. Whereupon I obliged my self to hide her Instruments and to preserve them from the hands of their enemies. *These* Instruments *of Nature the profound* Lullye, *being so instructed by* Hippocrates, *keeps in the dark and points at them only in two Words, calling them* Entia Realia.

So also Basilius Valentinus *hides Them under the barbarous terms of* Asa, *and* Phalaia: *Yea, the same Mechanical Instruments of Nature, which* Hippocrates *calls Fire and Water, He elsewhere styles,* Gladiatores: *And as* Hippocrates *did display them only to a few Disciples, after the manner of the* Pythagoreans, *under the operation of various Arts; so* Basilius, *following his Master, chuses to represent them under the notion of Brewing of Beer, and other Rural Labours.*

A Clavi. t. 2.

See Cur. Triumph. Antim.

But Paracelsus *despising vulgar Allusions, though condemned of Heresie by the Church, yet agrees with* Hippocrates *in This most* Ancient Learning, *and holds forth the afore-said* Instruments *of Nature under the names of diverse* * Spirits.

* *One Spirit draws, another thrusts out, both doth something, &c.* Hip. l. 1. De D.æ.

The rest of the Ancient Philosophers vailed the said Architectonick Instruments under the feined compellation of Re-bis *(as if intimating two things) Hence the Rythme,*

Est *Re-bis* in dictis rectissima norma figuris,
From Rebis, *as two things,*
The right Rule springs.

Others have notified and represented Them under other disguises, &c.

I answer, That I was not without the deep consideration of these and many other things in my mind, yet (for a reason to be mentioned anon) I could by no means be diverted from my purpose; especially being perswaded, that therein I benefit the Common-Wealth, *to which all of us owe the greatest part of our Fortunes: For in displaying these* Instruments *of Nature, I do likewise exhibit a sure and certain Method, hitherto observed by few, exclusive of all Ambages and Fallacies; so that for the future, This most Ancient, Noble, and Necessary Art of* Chymistry *may for ever be vindicated from the Calumnies and Barkings of Illiterate and Flagitious Persons, who are its rude and ignorant* Haters.

Ans.

For

what doth more frequently proceed from such Giant-like Mouths (not only against the afore-mentioned lights of the World, but also against Those, who out of their Zeal for Piety and Freedom, have endeavoured by their assiduous labour and meditation to conquer those Difficulties and dispel those Obscurities, which the Ancients (worthy to be had in perpetual remembrance) have propounded), than the names of Apostates, Mountebancks, Empiricks, *or* Experimentalists (*though this last Epithite they sparingly give; as not willing to mention any thing of* experience) *Yea, they likewise threaten and crack amongst unlearned ears (a just Wonderment that so great Arrogance can be spent on so small a Subject) that they will shortly manifest to the World by their Pens, the Vanities of* Chymistry, *though they never yet knew what this Ancient* Dame *was, nor had ever the honour to salute her, so much as at the Threshold. O how sorely do they mistake our Friend* Galen, *whose Followers, yet they profess themselves to be. For he teaches,* *That in every thing a Man must first be his Crafts-master, before he begins his Work. *Assuredly there is a great difference between the* Skill *of making Experiments, and an* habit *of uttering vain and empty words. Of such* Heraclitus *said of old,* It is not best to hide their ignorance; *but 'tis fit (as* Plutarch *speaks) to discover it, and to endeavour to heal it.*

* In lib. Hip. de Aliment. Comment. 3. Text. Pharmacia.

Such Learned Men, who have not had their minds darkned by vain and prejudicate Opinions, have had far other thoughts of Chymistry: *For* Mathiolus *writes to* Andrew de Blau, That no man can be an ordinary, much less a compleat Physician, who is not well exercised and versed in Chymistry. *But what need is there to allsage the Testimonies of Learned Men in the case?* Nature *it self fights for* Her, *which, without this* Art, *cannot produce so much as one grain of* Seed; *as shall be demonstrated:* Hippocrates *was very well skilled in this Ancient Doctrine, as will easily appear; Yea, He commends it to all the true lovers of* Physick: *Nay, without this* Art *the enemies and opposers of* It *would live like Brute-beasts, not having an House to defend themselves against the injuries of the Weather; for they would want* Lime *and* Brick *for building: neither would there be* Glass *for Windows, nor* Looking-glasses, *or* Spectacles, *necessary helps*

Lib. 4. Epid.

for

for Old-Mens eyes. Tea from whence could the leaſt gain be expected? unleſs the melting of Minerals, and the ſeparating of Metals had been found out by Chymiſtry? *Were is not for* This Art, *Printing would fail, Nature of her ſelf would never bring forth* Linnen, *nor* Paper, nor *Ink to Write, or Print with; neither ſhould we have any* Colours, *of which this neceſſary and noble Art hath produced an infinite number; for* Cinnabar, Ultramarine, Blew, Minium, Ceruſſe, Purple, * Aurum Muſicum, *and the temperature of other Colours, are the products of* It: *Tea, who can enumerate all the Benefits ariſing from this* Art, *for the uſe of Mankind? The whole Northern Region, as well as my own Country, owe much to this Art; for hereby is made a Drink out of* Barley, *which is called* Ale, *or* Beer. *Now* Barley, *as* Galen *teacheth, if it be a little boiled, cauſeth Windineſs; if boiled to an higher degree, it occaſions Obſtructions. But our Anceſtors being inſtructed by* Hippocrates, *through the help of this* Art *have excited the inſtruments of Nature in* Barley *it ſelf, and have changed it into a new Seed, no longer called* Barley *but* Mault. *They boil this* Mault *after it is grinded, and again excite the inward Organs to Alteration, which action is called* Fermentation, a Fervendo. *After this manner, as* Hippocrates *inſtructs us, is this moſt wholeſome Drink made of It.*

* *An Artificial Gold uſed much in* Italy *by Painters.*

But what do I ſpeak of Beer? The Juice of Grapes, of it ſelf, would never be made Wine, *unleſs Art did concur to ſtir up the Organs in it to Operation. The like may be ſaid of* Bread, *which in the abſence of this* Art *could never be compleated, unleſs the inſtruments of Nature in the* Meal, *by a proportionate degree of Fire and Water be excited from without? For when* Theſe *begin to act upon one another, for want of new matter, the* Lump *or* Dough *firſt ſours, then by degrees it putrefies, and at laſt breeds Worms: But* Art *retards, or hinders the Operation of thoſe Inſtruments by vehement Heat or Cold; and ſo the Work is perfected, and* Bread *made, which is ſo neceſſary for the Suſtentation of Man's life.*

Wine.

Bread.

Neither do Aliments *alone ſtand in need of this* Art, *but alſo the moſt Wholeſome and Effectual* Medicines *cannot be made without it, as amongſt others, We may ſee in* Treacle; *for unleſs the infinite Inſtruments of Nature in the* Simples, *which make up that* Compoſitum, *be united by Fermentation, and ſo ſuffered to reſt, it would be altogether uſeleſs.*

* Lib. De Viribus Cordis. Tract. 2. c. 4.

For *Avicen *says, That*, That Medicine is of double Vertue which hath suffered Fermentation. *For which cause the Inventer thereof, being well skilled in Chymical Operations, adds* Wine, *that the Work may be more readily done. For all Natural things are transformed by* Fermentation, *as is plainly seen in the* Juice of Grapes, *in Brewing of* Beer, *and in Making of* Bread.

Obj.

But it is alleaged, though Reason and Truth it self do evidence these things to be so; yet notwithstanding the Novelties which you introduce into Philosophy *and* Physick, *and the Mineral and Metalline Remedies prescribed by you, which are very contrary to Man's nature, and were unknown to Antiquity: These are the things which we implead and oppose.*

Ans.

I answer. It is an impossible thing to introduce Novelties *into the World; but to perfect, alter, throughly to mix and compound things introduced already by the Creator, is very possible. This* Hippocrates *teacheth, and it is allowed to Art. So Flax or Hemp, by various alterations is made* Paper: Grass *by the like Alterations is changed into a* Glove, *and also into* Glew. *The* Juice of Flowers *by a various Alteration is made* Honey; *and* Honey *in like sort is changed into* Hydromel, (i. e.) *Mead or Methegline (a most pleasant Drink in* Lituania, *nothing inferior to Spanish Wine) and at length it turns to* Vinegar, *which is afterwards easily reduced to Elementary* Water. Bread-corn *by Alteration is made* Hot-water. *Sundry* Simples *gathered together and mixt in one, by Fermentation became* Treacle. *So, since* Hippocrates *his time*, Cassia, Sena, Mechoacan, Cremor Tartari, *and infinite other things are found out, which he made no mention of; which yet are not* new, *but only retrieved and brought forth into use again by long Study and Experience. So that we may boldly say with the Wise Man,* There is no new thing under the Sun. *Whatsoever therefore the Followers of* Hippocrates *have handed out, and as it were Mid-wifed into the World, the same* was *from the beginning, though our eyes were not so clear-sighted, as to discover it. But* Stephen Pasquier *answers this Objection very Elegantly,*

There is nothing made which was not before, but things thoroughly mixed and severed, are altered. L. 1. De Diæt.

Eccl. c. 1. v. 10.

Dicitur esse novus, nobis Paracelsus, ob idque;
Crimen, in obscurum pellitur exilium.
At novus *Hippocrates*, novus est *Chrysippus*, & ipsi
Romæ Asclepiades, tempore quisque suo.
Qui nova damnatis, veteres damnetis oportet,
Aut ista nihil est in novitate novi.

Englished

Englished thus,

Some Paracelse *of Novelty implead,*
For which Judg'd Crime he erst was banished.
So Hippocrates, Chrysippus, *and at* Rome
Asclepiade *too, were* New, *They'd all one Doom.*
They who condemn new *things, condemn the* old,
Or else do both mis-judge, and are o'r bold.

As for Mineral *and* Metalline *Remedies, neither these were not newly introduced into* Physick, *but were in use among the Ancients. For* Treacle *that most ancient Compound, is altogether Ineffectual without* Chalcitis; Alkermes *takes into its composition* Lapis Lazuli, *and* Gold, *the perfectest and noblest of Metals. The same* Mesue *made Pills of the same stone of good use, in Melancholy and Madness; which latter* Practitioners *guild over with Gold or Silver.* Gold.

At Vilna, *the Metropolis of* Lituania; *I knew a Silver-Smith, a lusty Fellow, a Batchellor, unlearned, yet of so happy a memory, that in his own Mother Tongue, he could repeat almost word for word whatsoever he had once heard. This man from his youth to that very time, which was the 47th. year of his age, had accustomed himself daily to eat a little of the filings of Silver, as he was at work, and he firmly believed that the use thereof encreased his memory.* Silver.

Emeraulds, Rubies, Jacinths, *do they not enter into various compositions, which we call Cordial ones?* Gems.

Sulphur *is daily prescribed in the Diseases of the Lungs, and is praised by* Dioscorides *a very Ancient Writer.* Sulphur.

Iron *is commended by the Ancients in the Diseases of the Spleen, and we use it at this day with good success; Mineral Waters were in great veneration among the Ancients, and* we *also have recourse to them every year in desperate cases.* Iron.

But what will they say of Salt, *without which Man's Life cannot be sustained, and which we use every day in seasoning our Meat? Is that a new Invention? or had the Ancients no knowledge of it? yet it is excocted not only from the* Sea, *and from* Fountains, *but there are besides* Mountains *and* Mines *of native solid Salt, like Marble; out of which it is hewn, and grows again, like Stones in Quarries.* Salt.

I my self have seen such in Valachia, *and near* Cracovia,

a greater Revenue arising thence to the King, *than from any other thing; which yet cannot be called a* Vegetable, *nor an* Animal; *it must therefore needs be a* Mineral.

So for external Remedies, The Ancients never composed their Oyntments, Plaisters, Collyries, *and such like, without* Minerals *and* Metals.

Lead. *Of* Lead, *mix'd by Chymical Art, with Vinegar they made* Ceruse *for the Unguent and Plaister, which is called* White; *of* Lead *is made* Litarge, *of which is made the* Emplastrum Triapharmacum: *All these were found out by the Ancients.*

Copper. *Of* Copper *and* Vinegar *by the same Art is made* Verdigrease, *which enters into the composition of the* Egyptian Oyntment, *so called from its Swarthy colour, the invention also of the Ancients.*

But why do I spend time in mentioning these things, there is not an Old Woman in Italy, *but will inveigh against the opposers of this* Art? *for without* It, *it is impossible for them to find out ony thing to Colour and Dye their Hair.*

In a word, whatsoever Famous and Excellent thing is performed by Art, *it proceeds from the foundation of This Ancient* Philosophy; *though men know this well enough, yet they* L. 1. De Diæt. *are ashamed to speak it out. The Old-Man,* Hippocrates, *admiring at this stupidity and turning to his Followers, says (smilingly and with a low voice)* The Divine Mind hath instructed men to imitate her Works; they know what they do, but are ignorant of what they imitate. *They are* Hippocrates *his words. So that,* Hippocratical Chymists *do not endeavour to produce* new things, *but to recal from Oblivion, Things approved by the* Ancients.

It is further objected, That the strong Remedies of Quicksilver, *and* Antimony *do evince the ignorance of* Chymists; *The use of them being abominable, and taken at Mouth, they oftentendanger Life.*

As if *Lapis Armen. L. zuli*, and Unguents of *Quick silver*, were pleasant.

As for the ignorance objected, I wonder not at it, for it is an Epidemical *Disease in all Professions, and especially in* Physick, *which of necessity takes it original from this* Ancient Art. *This made* * Hippocrates *to say, That* Physick was indeed the noblest of all Arts, but it was depretiated by

* De Lege.

reason

reason of the ignorance of those who practised it. 'Tis ignorance *therefore which occasions all the Mischiefs in* Physick; *neither doth it raise greater envy any where, than amongst those who follow not the* Chymical way *of Practice, whose envy sometimes appears in their looks: So that now a-days a* Physician *is ordinarily despised, and exposed to the Scoffs and Taunts of Facetious Wits: Oh, where is the* Majesty *wherewith* Physicians *did once shine amongst themselves? What's become of the esteem and brotherly respect one towards another, which* * Hippocrates *so much commends? In our age one* Physician *undervalues another, carping at what he says or does; yea, he quarrels at, and opposes (behind his back) That which he understands not; extolling himself amongst the ignorant Vulgar, for the sordid hope of a little Gain. If such persons by the help of our* Furnaces, *had learned that the Principles of* Chymistry (i. e.) *The Instruments of Nature, according to* Hippocrates, *were the Foundations of Medicine,* Physick *had never been divided into so many Sects, as it is at this day. For now there is a Sect risen which divides* Physick *into two parts,* Chymical *and* Galenical, *against the mind of Old* Hippocrates, *who never mentioned but* One, *neither did* Galen *take notice of any such division. The opinions of* Hippocrates *and* Galen *seem too prolix to these men; for they are contented with a few Rules, and though ignorant of the instruments of Medicine, yet do pride themselves in being accounted and called the only* Canonical *Physicians by Old-Wives and Plebeians.* Galen, *who was addicted to no Sect, yet most accomplished for Learning and Prudence, calls such men* Servi, *for* He *was willing to consult with all sorts of persons; Fisher-men, and men of the lowest rank, with rude and unskilful Plebeians (why then doth* Sennertus *in his Book* De Consensu, *chap.* 4. *impute This as a fault to* Paracelsus) *not only that he might escape the censure of* Hippocrates *(who also was not ashamed to ask questions of plain Countrey-men in the beginning of his Book of* Precepts) viz. *Ignorance, but also that he might be able to discern Truth from Falshood: For that quick-sighted person knew very well that nothing could happen more Calamitous to the Sick, than to lay credulity, presumptions, opinion, and uncertainties, as so many Syrtes and Quick-sands for the foundations of* Physick. *And though*

* De Decenti Ornatu.

in

in Galen's *time Natural Philoſophy, which now we call* Chymiſtry, *was confined within a few mens breaſts under an Oath of Secreſie, yet for the ſake thereof* He *travelled over all* Egypt, *where that* Art *moſt flouriſhed at that time; which ſhews the wonderful Curioſity and Diligence of the Man: for returning into his one Country, he diſtributed divers rare Medicines, which he there learned, among ſeveral Phyſicians, his Friends; That ſo they might be approved by their Experience. Thus he wrote of the wonderful efficacy of* Fire *and of* Treacle *to* Piſo, *a Piece moſt worthy to be read: And he highly extols* Æſchiros, *the Empirick, his Maſter, from whom he learned how to* burn Crabbs.

De Simp. Med. f. 18.

Wherefore Galen's *Praiſe remains entire, and He will always be accounted a moſt ſagacious Perſon; To whom, as well as to* Hippocrates, *a Reverence is due, as to the beginners and producers of many, if not all Good Things.*

So that Natural Philoſophy (now ſtyled Chymiſtry) *according to* Hippocrates, *is a moſt Ancient Science, being derived from the Greek words* 'Als, *ſignifying* Salt, *and* Cheo, *to Melt: Hence came the word* Alchymy, *as much as to ſay,* The Art of melting Salts. *And 'tis rightly called ſo. For Nature her ſelf can produce no fruit at all, unleſs the Internal Salts of the Seeds be diſſolved in the Earth (as I ſhall Ocularly demonſtrate:) And theſe once diſſolved, do again act upon one another, and ſo ariſe into a Plant for its peculiar uſes, and then they ceaſe from their labour; for as* Hippocrates *affirms,* One Spirit draws too, another thruſts from, both doing the ſame thing, and it inclines to either part (the Encreaſing and Vegetating) and ſo they imitate the nature of Man.

The Chymical Philoſopher, inſtructed by Hippocrates, *takes theſe Seeds thus brought by nature to Maturity, and in them conſiders thoſe Two* (Salts) *the Organs of Nature,* viz. *Fire and Water; and by Art, he urges them to action, by melting the Salts according to Natures Law, as* Alchymy *teaches, and then a new thing is produced, which was not before; for Example* Bread, *In This the* Hyppocratiſt *or* Chymiſt *again takes into conſideration, the Inſtruments of Nature; which he further aſſiſts by his helping hand, melting the Salts; and imitating Nature, he again brings forth a new Production, which*

we

we call Vinegar: *Now the* Chymiſt *obſerving that in this Vinegar the* Fire *doth exceed the* Water (*our Maſter teaching*, That no Sapor ſhould overcome by its proper faculty:) *He therefore conſumes the* Acid *part by its contrary, and again divides the* Fire *from the* Water, *and ſo a new Production called* Hot-water *is generated, which afterwards by the occult help of Art, is fixed into an* Alcaly; *and ſo the Curious* Hippocratiſt *goes on mixing and altering, till he obtains his intent: And at laſt he deſtroys both the Inſtruments or Faculties by repeated meltings of the Salts. And though hereby he may ſeem to ignorant Perſons to have produced ſome* New *things, yet there is no ſuch matter, for the things are moſt* Ancient, *only he melts and re-melts the Salts as often as the Laws of Nature will permit; which is not beyond the* fourth *Repetition, as* * *Learned Men with reaſon ſay. But of this enough at preſent.* Hippocrates *ſhews that this repeated Fuſion-melting, and Exaltation of Salts, honoured by the Ancients with the Title of* Alchymy, *hath place, not only in the* Vegetable, *but alſo in the* Mineral *Kingdome; for, ſays he,* Gold workers do beat Gold, waſh it, and melt it with a ſoft Fire, for it will not be made up with a ſtrong. *By which ſaying he diſcovers the ignorance and unskilfulneſs of Thoſe, who write that* Chymiſtry *is exerciſed about the ignoble fuſion of Metals and Minerals, as if theſe would be melted with a* ſoft *Fire; but the contrary is well known to ſuch who have overſeen either of them to be melted; for Gold requires not a gentle, but a very ſtrong Fire; Wherefore the Philoſopher doth not here underſtand this rude way of Operation, though he takes his beginning from it; which he preſently clears by a plain familiar example:* Man, *ſays he,* doth threſh, waſh, and grinde Bread-corn, and baking it, he uſes not a ſtrong Fire to make it up in a body, but a ſoft and gentle one.

Wherefore the Fire of the Chymical Philoſopher *in the extraction of Animals, Minerals, or Vegetables* (*called* Small Elixirs *by the* Moderns) *muſt be moderate.* Hippocrates *teaches,* All things to be like which were unlike. *But as ſoon as Fire exceeds the degree of being* moderate, *'tis no longer the* Philoſophers *fire, but* the Artiſts; *for then things are not* advanced *by the intervention thereof, but are* altered *thereby, as our* Maſter *teacheth in the fore-cited Book.*

* Dee, Holland, &c.

L. 1. De Diæt.

Galen *had no knowledge of Metals, or of Quick-ſilver.*

Who-

Whosoever therefore do apply themselves to the Fusion *or* Liquation *of Salts, either with a* gentle *or a* vehement *heat, They all have their dependance on this* Ancient Chymical Philosophy; *So that such persons are in a gross and ignorant Mistake in the judgement of* Hippocrates, *who exclude Apothecaries from this Art. For when* Pharmacopæans *do pound Vegetables, and wring out their Juice, then it is that they make a fusion of Salts, expelling and thrusting out the Exotick and Forrain, not being of one and the same temper (they are* Hippocrates *his words) but when they condense the melted Salts with Sugar into a Syrup, then they throughly mix and alter them*; So 'tis, *says* Hippocrates, with the nature of Man, all Arts communicating with humane Nature.

Wherefore if Nature *do precede* Art, *and* Art *doth but imitate* Nature, *there is no man under the Sun, who hath not within himself, as it were a Chymical and Salt-melting shop; only the* Canonical Physician, *who bears an hatred to the opinions of* Hippocrates, *by reason of his ignorance of this* Ancient Art, *excepts himself, as being altogether unacquainted with this divinely inspired* Science. *And by means of such* Ignoramus's, Physick *is accounted the meanest of all Professions, for it hath no foundation to build upon: Of such* Ignorants, Seneca *speaks,* That they are always learning, but never attain to the knowledge of the Truth.

Ars Glaucon. initio. *and* lib. 1. De Venæsect: adversus Erasist.

Hence it is that Galen *in his rich Writings approves and commends* Hippocrates *to us, as the Guide and Author of all Good, which* Epithites *he frequently bestows upon him; thereby eternizing and consecrating his Name to Posterity.*

This so well grounded opinion of Galen, *hath moved me, never, as long as I live, to admit of any other Doctrine in* Physick *but that of* Hippocrates, *which I believe will be Coævous with Nature it self.*

Otto Tachenius,

HIS

HIPPOCRATES CHYMICUS.

The Occaſion of writing the Enſuing Treatiſe.

CHAP. I.

A man knows only ſo much as is certainly diſcovered to him by either Mental or Manual Operation and Experiment.

THE perfect knowledge of all Sciences is ſo difficult, that the Life of Man would ſooner be at an end, than he can attain unto the compleat underſtanding of any one of them, (ſo as to be put beyond all diſpute) by the help only of * Paper-books. *Socrates* having made a through diſquiſition into almoſt all Sciences, was then judged the wiſeſt of men by the Oracle; when he openly profeſſed, that he knew nothing at all: This the Preacher ſeems to confirm to us; *I beheld*, ſays he, *all the Works of God, that a man cannot find out the reaſon of the Works which are done under the Sun, and the more he labours to find it out, the further it is off; though a wiſe man think to know it, yet ſhall he not be able to find it out.* The Divine *Hippocrates* was not ignorant of this difficulty of obtaining knowledge in our Art of Phyſick, which made him ingeniouſly to confeſs it in his * Epiſtles to *Democritus*: *For*, ſays he, *though I am an old man, yet I am not arrived to the true knowledge of Phyſick*: And the ſame perſon avers, * *That our life is too ſhort for the acquiſt of any one*

* Which yet are not wholly to be rejected.

Eccl. Ch. 8. *v.* 17.

* In *Epiſt.*

* 1. *Aph.* 1.

one Science, from the very Foundation thereof. Hereupon he advises us, to honour and esteem those which have endeavoured *to search out the hidden works of Wise Nature*; adding withal, that *no one of them could be justly blamed, though he were not able fully to find them out.* But it seems the Writer who reformed the *Augustane* or (*Auspurgh*) Dispensatory, was of another mind; his Book was printed at *Tergow* by *William Vorhoven*, A. D. 1657. Upon occasion of that Book, a few days since, my respected Friend, *John de Lanoi*, a Famous Bookseller of this City, asked my advice, whether I thought it worth his labor to Print it here, *&c.* 'Tis true, I had heard of the Title before, but I had never seen the Book, for I had not so much leisure as to spend my time in reading such *Pieces*: Nevertheless, upon that occasion, at spare hours I read it all over, and could not but take notice of, and wonder at that corrupt Custom (so familiar to him and others, against the direct Precept of *Hippocrates*) that whatsoever a man had honestly found out by great Labour and Study, and had commended it to Posterity in writing for the good of the Publick, the same should presently be traduced, defamed, and spurned at amongst the Ignorant Vulgar, not by force of Reason and Experience, but by monstrous Calumnies and Reproaches, that so (like *Herostratus*) they might procure some fame to themselves, by the ruine of other mens Credit. The Reformer of the *Auspurgh* Dispensatory treads in those steps, railing and declaiming not only against the Ancients, but the Moderns also; Followers of *Hippocrates* and *Galen*, in such sort, that there is hardly an Arrow in the Quiver of Slander, which he shoots not at them. I had formerly instructed this Man in the way of making *Viperine Salt*, but under a Metaphorical disguize (for I had denied to teach him in plain terms) and now he proclaims me for a Cheat, and that *I hinder by Imposture the making of it publick*: I ingeniously confess, that here, at least in part, the Reformer speaks truth; for whatsoever made Physicians who were lovers of Truth famous heretofore, the same things Impostors do craftily adulterate. Our *Hippocrates* was a-

L. 1. de Diæt.

Pharmacop. f. 487.

fraid

feaid of such Cheats, which made him conceal his Anti-pestilential Medicament, by which he had procured so much Honour to himself, and had happily and securely cured that Disease; as his Epistles do testifie.

Paracelsus did also dread Impostors, who by his wonderful Art cured the (otherwise incurable) Contagions of the Body, as his Epitaph speaks; which may be seen graven on a stone at *Saltsburge*, in the Hospital of *S. Sebastians*.

In our dayes *Lazarus Riverius* feared the like Cheats, and for that cause he published his *Specifique* against *Feavors* under a Metaphor. So *Helmont* very prudently vailed the Liquor which (with *Paracelsus*) he calls by a corrupt Name *Alcahest*; which yet is not free from Adulterators; but instead thereof the Reformer substitutes *Vinegar*; * hereupon, being instructed by my loss, I became my own School-master, and have often thought upon that Saying of *Eschouruenterius* to *Gratarolus*, *Thou knowest on easier terms the Sentence passed at* Bononia, *that he was proclaimed a Traytor to his Country, and worthy to be hanged, who first made a Filatorie at* Trent *in* Germany; which is an Engine whereby Raw Silk by Spindles is artificially drawn into Threads.

* *In Append. f.* 72.

So that I have hitherto concealed That which might ennoble a Physician, being jealous, not without cause, lest by my sluggishness and neglect, it might fall into the hands of Impostors, and thereby the worthy and the unworthy should undergo the same Fate.

But the earnest importunity of this * Reformer hath caused me to select some things out of the heap of my Observations and Experiments (which I had designed only for my own use) and now to make them publick; yet still I keep to the Precept of † *Hermes*, *That the Wisdom of the Author ought to be greater than his Book*. But I must follow the Clew of inevitable Fate; and I undertake this labour the more willingly, that I may discover the right way to those that wander, and may bring back Straglers into it: As also, that those who have hitherto opposed this Art, might at length correct their mistakes, and begin to be wiser: And further also,

* *Pharmac.* 487.

† *Libro Radic.* None are worthy of the name of Teachers, but such who teach by sure Principles and causes. *Arist. in Proem. Metaph.*

that they who practiſe it, may aſſuredly underſtand that it is founded on the Principles of Nature; and ſo for the future may be delivered from the crafts and deceits of Sophiſters and Impoſtors. In this work, I mind more the Truth of the Cauſe, than the Ornaments of Elocution; for the ſpeech of Truth, ſays *Euripides*, is plain, neither matters it therein what ſtile we uſe, eſpecially ſince *Cicero* doth not require Eloquence in a Philoſopher, much leſs doth *Celſus* in a Phyſician: For as *Plato* ſaith, when we diſpute of *things*, the rudeneſs or the elegancy of *words* are not to be heeded, but only that ſatisfaction may be obtained, as to the Doctrine of the things themſelves; neither have I inſerted florid diſputings, or odious altercations, but whatſoever offers it ſelf more occultly to the Senſes, that, Experience being my guide, I have deſpoiled of its coverings, and have expoſed the truth of things naked to the eyes of all beholders, ſo that every individual man may know it; for Truth loves brevity, not diſputation. By this Compaſs I have Steered: Draw near therefore, all ye Lovers of Truth, and you ſhall behold things (both admirable and pleaſant) with your eyes, yea and handle them with your hands, which have hitherto ſtood remote from our ſenſation and knowledge. Now to the work it ſelf.

Three words are ſufficient in a juſt cauſe.

Qui nimium properat, ſerius abſolvit.

Or,

No more haſte, than good ſpeed.

CHAP. II.

THe * Reformer begins with a lofty Brow: *Now*, ſays he, *let us come to the examination of the Salt of Treacle of the Ancients, whoſe preparation was ſo Childiſh and abſurd, that their ſimplicity did no where more appear than about it*, &c. And a little after, *Animals only have Volatile Salt, and in a violent Calcination, leave commonly nothing behind them, ſave only* Terra Mortua; *yea, the reſt*

* *Pharmac. f.* 481.

of

of these absurdities are not to be passed over in silence, in that they substituted Sal Armoniack *in the place of Common Salt, not at all, as I perceive, understanding the matter, because all the* Sal Armoniack *is vanished into Air, and so there remains nothing to them, neither of the Vipers, nor of their added Salt.* Thus he.

Do not rashly condemn the guiltless, not having throughly weighed their cause.

But for my part I cannot see that the Ancients deserve to be accused of absurdity or simplicity in this thing, so as to incur the undue reprehension of the Reformer: so that before we judge, we are to hear, and that both sides; and we ought to find out what the *Sal Armoniack* of the Ancients was, and for what reason they substituted it in the room of Common Salt? and for what end? and wherein their offence lay? so as to merit the rash anger and bitter despight of this Reformer.

No imaginary things here.

To make these things more plain, it is necessary that we dive into the secret nature of certain Salts, in order to the examination and understanding of them, and of the differences between them, by accidents proper to them, and known to Sense, and that not by Logical and [illegible] Syllogisms, or imaginary Non-Entities, but [illegible] Experimental and Natural History: I say then, [illegible] to prove, that not Animals only have [illegible]alt, but, against the Opinion of this Reformer, [illegible]all Vegetables also have not a grain of fixed Salt [illegible] Nature, unless they acquire it by Art. But first I will speak of things more known, proceeding afterwards, by degrees, to those which are more occult. *Pliny* witnesseth, that Natural *Sal Armoniack* was in great use amongst the Ancients; *It is found*, says he, *in* Africa, *in the Country of* Cirenia, *till you come to the Oracle of* Jupiter Hammon *in lumps, somewhat long, and under the Sands.* *Dioscorides* confirms the same, that *Sal Armoniack* is praised from the Country where it is found. This Salt endures constant in the fire, being, after its manner, of a more Salt-acid relish, than our common Trencher-salt, as I shall shew; and therefore the Ancients found it more advantagious for Medicines, and for that cause have more commended it to us: But that which is brought to us is not in longish lumps, neither

L. 1. Ch. 7.

is

is it Natural, but is made by Art, *viz.* of the Natural, and of the Volatile Alcaly of Animals, as the resolution of it shews, according to the Axiom of * *Aristotle*, for it is divided into an Acid Spirit of Salt, and also into a volatile Alcaly (all salt things are divided into two substances, *viz.* Alcaly, and Acid, as I shall shew by degrees) both which being separated, and again reunited, become the *Sal Armoniack* which it was before. The Acid part or Spirit, hath all the properties of that which is distilled from Common Salt; but the Alcaly is of the same nature with that which is sublimated from Mans Urine, only 'tis not so stinking: Whence I conjecture, that they chose Camels Urine, not Mans, for the composition: For the Urine of Camels, as *Pliny* observes, is more profitable for Fullers, than the Urine of other Animals, from whence there must needs be a richer Alcaly; perhaps because they eat no Salt, as other Animals do, for common Salt doth not wash out, or cleanse; therefore Nausicca, *the Daughter of* Alcinous, *washed her Linnen in a Fountain on the Sea-shore*, as *Homer* records.

But Artificial *Sal Armoniack* is made after the same manner as Sope; for Nature works alike in all things, as * *Hippocrates* says, to wit, of the Acid part of *Sal Armoniack*, and the Alcaly of the Urine of Camels (or other Animals, 'tis all one) I have made the like Salt from the Alcaly of Soot, and the Acid Spirit of Salt, (for want of other) for the Urine doth dissolve the Salt by Maceration; and the Alcaly of the Urine, which otherwise in a few days would vanish, here being delayed and stop'd, finds the Acid which it imbibes, and so of the Acid part of the Salt, and the Alcaly of the Urine, a new Artificial Creature is produced of a salt relish. But that which is not of the same nature, nor † accords with this new Salt, of its own accord is severed, and sinks to the bottom. The clear Salt liquor swimming at top they boil and scum, and again suffer the *Faces* to settle, and at last coagulate it into a Cake. This is the *Sal Armoniack* which is brought to us, but it is not that which the Ancients chose for Salt of Treacle, as the Reformer guesses; but

* All things necessarily consists of that into which they can be resolved.

L. 28. *c.* 8.

Odyss. l. 8. from *vers.* 85. to 96.

* *L.* 1. *de Diat.*

Sal Armoniack.

† *Hip. l.* 1. *de Diat.*

but that is the Natural which is found under the Sands (ἄμμος) as *Pliny* shews in the fore-cited place, of which I shall speak more clearly in the Progress of this Work; but before I proceed, I must explain more fully what *Alcaly* is.

CHAP. III.

Sal Alcaly, *what it is.*

IT is not my purpose here to deduce the matter, *ab ovo*, as they say, or from the very Elements, but to manage a Demonstration concerning things Physical, Natural, Material, and known by our Senses. Know then, that *Salt-Kaly* is made of the Herb *Kaly*, coming in great quantity out of *Egypt*, which is there burnt whiles it is green, and so brought over to us, and is called by some *Soda*, and *Alumen Catinum*; but the right name is *Sal-kaly*. This Salt is not found in Natures three Kingdoms, unless it be produced by Art, through the help of Fire; whence it is that this *Virgin* is said by the Ancients to have three Fathers, *viz.* Nature, Fire, and the Philosopher.

I call the Senses the Guides of Life, and of all its Operations

This *Sal-kaly*, as other Salts, is part of the *Compositum*, yet deprived of its seminal vertues, only it hath an abstersive, Sope-like, and resolving property; and by reason of this inanition, being as it were without form, it sucks up and imbibes all sorts of Acids, (the Ancients call it impregnation.) Hence it is that all Salts which do mortifie Acids are called by one general name, *Alcalies*, which are found not only in the vegetable, but also in the Animal and Mineral Kingdoms: And in these three, there are several sorts of them, *viz.* fix'd, volatile, manifest, occult, and of a middle nature, taken from parts of Animals which are to be demonstrated to the eye. But first I shall begin with that which is more known, which is found in a Flint, which considered, *quatenus*, a Flint, is thought by the unskilful to be under the Regiment only of one Rector; but the skilful Glass-

Alcaly is *inane* and empty.

Glaſs-men of *Murano* have obſerved, that though taken from its Native place, it weighs 100 *l.* yet it yearly acquires 10 *l.* or * thereabouts, to its weight. Hence the *Hippocratiſt* learns, that *Jovis omnia plena*, yea that it receives nouriſhment from the ambient Air, but as ſoon as the External and Artificial Fire ſupervenes, then the skilful Operator ſometimes converts it to Glaſs, and ſometimes to Calx or Lime: So that the *Hippocratical* and *Chymical* Philoſopher comprehends two different Faculties in a Flint (being ſo inſtructed by his † Maſter Fire and Water ſo called, for the two reaſons which conſtituted a Flint:) Theſe Faculties the Chymiſts alter by the help of a due Fire, which alteration is called *Incineration*, for of its own accord it turns to a Powder, whence it is called by a common name, *Calx* or *Lime*.

* *Colmopolita* ſays, that the occult Food of Life is in the Aire.

† *L.* 1. *de Diæt.*

In this *Calx* or Calcinated Aſhes, the Chymiſt again comprehends the above-named Faculties, which for our better underſtanding, we will now once for all, * and at all times hereafter, call the *Acid* and the *Alcaly* from their effects.

* *Acid* and *Alcaly* the inſtruments of Nature.

Calx then, or Lime, hath two Salts, or (as *Hippocrates*) two Faculties in it ſelf, the *Acid*, and the *Alcaly*, both moſt conſtant in the fire, and one contrary to the other; and when the *Calx* is ſprinkled with water, then the Salts are diſſolved, and act upon one another. The *Alcaly* ſucks in, and acts upon the *Acid*, and this again aſſumes the *Alcaly*, not for the deſtruction of either, but for the Production and Generation of a new thing, and whatſoever they lay hold on in that Generation, not being too heterogeneous from their natures, is concreted with them into the hardneſs of ſtone; ſo one contrary is coagulated by another.

That the Fire is *Acid*, the Water *Alcaly*, I will ſhew in its place.

This knowledge of *Calx*, if the Reformer had learned out of *Hippocrates*, the Poor Man had never gone about the fixation of viperine *Alcaly* with *Calx*, as with a lamentable voice he declares in his Diſcourſe concerning Salt of Treacle. After the *Hippocratiſt* hath learned, that according to the Laws of Nature, *Calx* is petrified by contrary Faculties, then he reminds the Leſſon of his Maſter and Inſtructer, *viz.* that like is to be diſſolved

Pharmac. f. 485. Contraries are coagulated by contraries.

ved by like, and that not only in Artificials, but in Naturals, especially in Physick, and Humane Bodies, as will anon appear; *for Arts do imitate Humane Nature*: they are *Hippocrates* his words, who also teacheth, *That agreeable things adhere to one another.* *Hip. l. 1. de Diæt.*

CHAP. IV.

Alcaly *and* Oyl *are made Soap.*

Calx, or Lime, as I have said, hath two different Faculties, *Acid* and *Alcaly*: I have shewed before, that *Alcaly* hath at least a Soap-like and abstersive vertue, which *Hippocratists* have taught to extract and separate by its like: Therefore Soap-men add to the *Calx* a factitious *Alcaly*, burnt out of Vegetables in a triple proportion, because it mortifies the *Acid* part in the *Calx*, and melts the other part by its like; wherefore they moisten a little the Alcalized Ashes, with which they cover over the unslacked *Calx*, and so leave them, until the Lime or *Calx* falls asunder, as a sign of mutual action; then they mix them together, and pour on water, that the Mass may become moister (according to the Rule, *Salts act not unless they be dissolved*) then with a sufficient quantity of water they extract the Lixivious Fiery *Alcaly*; (I call it Fiery, because this boiling *Lixivium*, or Ley, consumed in a moment a Drunken Man with his Woollen Cloaths, so that nothing of him was found but his Linnen Shirt, and the hardest Bones, as I had the Relation from a Credible Person, Professor of that Trade;) which Fiery *Lixivium* they call *Magistra*, which is glutted with so much *Alcaly*, that an Egg will not sink in it. Of the same mixture is made also another *Lixivium*, less saturated, which will not bear up an Egg; with this last Lye (for certain reasons) in boiling of Soap, they first mingle Oyl or Tallow, (which is contrary to *Alcaly*, as containing an occult *Acid*, as will appear by degrees) but they boil it with a soft fire till they wax white, then they add the *Magistra* in a triple pro-

Like things are dissolved by like. *Hip. de locis in homine.*

Of Lime and Honey is made a mixture good for the brawniness of the Feet.

The greater is encreased by the less. *Hip. l. 1. de Diat.* *Hip l 1. de Diat.*

portion to the Oyl or Fat; and in boiling, the Oyl and *Alcaly* are coagulated, till they are compacted into one Body, as contraries, and throughly mixed; *For they never consist together in the same, but are always altered; so that of necessity the things severed and produced from them, must be dissimilary in their nature.* For out of the manifest *Alcaly*, and the occult *Acid* in the Oyl, is produced a thing of a Neutral Nature of a salt relish; sometimes they make tryal of it by the tongue, if the taste be sweet, they add the *Magistra*, if it be biting, it must be boiled till it hath absorbed the Oyl; but if it be more than ordinarily pungent, then they pour in Oyl leisurely at discretion, as *Hippocrates* teacheth, *Spiritus unus trahit, alter protrudit*, &c. *One Spirit draws to, another thrusts from, but both do the same thing, and tend to either part, and so they imitate the nature of man.* Sea-salt, because it is no vacuous and empty Body, as *Alcalyes* are, is not coagulated with fat, or Tallow into Soap, for it hath both its Faculties, not to be separated without difficulty, as I shall shew hereafter: For which cause, *Nausicca* the Daughter of *Alcinous* washed her Linnen out of a Fountain on the Sea-shore, as *Homer* relates, 6. *Odyss.*

L. 1 de Diat.

CHAP. V.

The Composition, and Dissolution, or Destruction of Glass.

GLass is made of the same Flint, and the same *Sal Alcaly*, by the Rule of Contraries, but not the *moist way*, (as Soap) but by a dry and fiery Fusion and Liquation: For sometimes three, sometimes two parts at least of the Powder of Flints are mixed with one part of *Sal Alcaly* (not of *Acid*, Trencher-salt) which by corrosion slacks the Flint, and absorbs it in the fire of Fusion. I say, part of the *Alcaly* sucks up the *Acid* which the Flint contains for Lime or *Cals*, and it swims a top of the flaked Flint, and is called *Axungia Vitri*. The *Fel Vitri*, being another part of the *Alcaly*, makes a coalition with the Flint, and is saturated by it; and be-

Anacreon Crell. in Lap. Medicum.

cause

cauſe *they conſiſt not in the ſame*, as *Hippocrates* teaches, they both become a Pellucide Maſs; then Artificers ſay, the Glaſs is baked: But the *Alcaly* ſwimming a top, and ſaturated with the *Acid*, that they ſcum off with an iron Ladle, and call it *Fel Vitri*, and caſt it away as unfit for Glaſs, for by the mixture it is changed into Salt; therefore Shepherds give it to their Cattle to lick, eſpecially in places where Salt is dear; this, in moiſt weather, eaſily turns to a liquor, and then the Powder of Flints ſubſides of its own accord: The liquor by heat is coagulated into true common ſalt, as its Granulation, and alſo its Diſtillation ſhews; but the Bottom, or *Fœx*, is a Medicine not to be deſpiſed in difficulty of Urine, as alſo is Flint fired and ſlaked in water.

But this Water is ſometimes preſcribed without ſucceſs, eſpecially when the Flint is leſs heated by its proper heat, and that Diuretick vertue ceaſeth, which then periſheth and ceaſeth, when the heat of the fire doth *Alcalize* the Flint (*i.e.*) when both Faculties go together into one, for then it doth not reach to the Urinary places, by reaſon of its fixedneſs; yea, at that time it hinders and retards other things which provoke Urine, in as much as it troubles the digeſtion of the Stomach, (which is made by *Acids*) and appropriates it to it ſelf. Then the Ancients began to reduce Glaſs into Powder of Flints, by Extinction, into an *Acid* Salt, with good ſucceſs.

Burning of Glaſs.

This Reduction and Preparation which is purely Hippocratical and very Ingenious, the Reformer (like himſelf) calls *ſleight, unprofitable, inept, and by all means to be exploded. See*, ſaith he, *how baſely ſuch Putative and Wordy Philoſophers do diſcover themſelves, who are deſtitute of that Philoſophy which is true, and into what errours they fall, diſcoverable and derideable not only by thoſe who throughly ſearch the ſecrets of Nature, but even by Clowns and Ruſtucks, old Wives and Goſſips: Glaſs this way prepared* (as our Reformer pungently goes on) *cannot be given without danger and hazard to a ſick man, though he be not preſently ſenſible of it.*

Pharmac. f. 732.

A monſtrous Speech is the ſign of a monſtrous Wit, ſays our *Galen.*

But I will prove againſt the frivolous Objections and Grounds of this Reformer, that he who taught this Burning of Glaſs was in the right, and I will vindicate him from thoſe Calumnies wherewith he is aſperſed, eſpecially from this, *That Glaſs this way prepared, cannot be given to the Sick without danger and detriment.*

Glaſs, whereof it is compounded, into the ſame and by the ſame it is reſolved.

Take then clear and tranſparent Glaſs, melt it with more *Alcaly*, like Glaſs, afterwards expoſe it to the moiſt Air, and you ſhall ſoon find the whole Glaſs to be reſolved into water; pour upon this a ſufficient *Acid*, contrary to *Alcaly*, and the Powder of Flints will ſubſide.

In Append. Pharmacop Reg. f. 136.

This Powder is no longer Glaſs, but the Powder of Flints, which the Reformer abhors, and ſays, it cannot be given to the Sick without detriment, forgetting that he himſelf commends the Powder of Flints to Queens for producing of Milk. The Ancients were not acquainted with this ſeparating Art, (which was beſtowed on Mortals from above) yet they had ſome hints of it by diſcourſe; and therefore they began to extinguiſh or flake the Powder, or Flower of Glaſs, in Aſhes of Bean-ſtalks, whoſe Salt is of an *Acid* ſalt nature, as I ſhall ſhew by and by; they repeated the Extinction always with new Aſhes, and waſhed away the Powder of the Glaſs with water, ſo that every Extinction was the deſtruction of the Glaſs, or *Alcaly*; this they waſhed, and again extinguiſhed, until the Bean-aſhes had deſtroyed all the *Alcaly*; and had left an impalpable Powder. This is the Powder of Flints, as That before melted with *Alcaly*, and precipitated with *Acid*, which the Reformer thinks cannot be ſafely given at Mouth, ſo much as to Country people, though he commends it to Queens (as I have ſaid) to procure Milk.

The over-buſie Reformer having his eye on the Ancients, in the interim ſees not his own errours.

In this Preparation (which the Reformer out of his ſloth and ignorance) calls *ſleight*, lies hid the profound knowledge of Natural things, as will appear by degrees, and the taking of it is not at all to be feared, as the Reformer falſly teacheth: But ignorant perſons are of neceſſity ſubject to great fears.

The true preparation and knowledge of Simples, requires almoſt a mans whole life.

Rumor sine Capite.
A Report without ground.

CHAP. VI.

THere is a way *reported* and practiſed of drawing out the Diuretick Vertue from Calcined Flint, by the deſtruction of the *Alcaly*, (that is, by a rule contrary to the *Alcaly*) with *Acid* Spirits, after this manner; into Spirit of Salt, they put by piece-meal unſlaked Lime, the Spirit is preſently abſorbed by the *Alcaly* of the Lime with great force and vehement ebullition, they draw forth the inſipid Phlegm, and diſſolve the Lime ſaturated with the *Acid* Salt, they melt it with a gentle fire in a Crucible, ſtraining it into a cold Mortar, when it is cold they beat it to Powder, (it then emitting fiery ſparks) from which, with hot water, they elicite the ſaltneſs, this they purifie and coagulate, and again ſuffer it of its own accord to run into a ſalt liquor, not unprofitable. But there are ſome Sophiſters and Impoſtors who give forth, that this Liquor is diſtilled in a *Lembick*, for they mix the foreſaid Liquor with Calcined and Powdered Flints in a fourfold proportion, and diſtil it with an open fire into an *Acid* Spirit, which by a wrong name they call *Spiritus Calcis Baſilii.* Now let us ſee to what Original or Parent, we may aſcribe the foreſaid diſtilled Spirit.

Firſt of all, the Spirit of Salt was abſorbed and ſwallowed up by the vitrifying *Alcaly*, and moſt conſtant in the fire.

Further, the *Acid* part of the Flint was ſeparated by the water, and caſt off under the covert of the *Faeces.*

Thirdly, the fixd *Alcaly* of the Flint or Lime drinks up the *Acid* Spirit of the Salt, and a Salt is made of the volatile *Acid* and moſt fixed *Alcaly.*

Fourthly, they mix this Salt with the Calcined Flints (*i. e.*) with the unſlaked Lime, which abounds more with *Alcaly* than *Acid*, as I have ſhewed in Glaſs and Soap.

And though this Mixture be urged with the ſtrongeſt fire, what elſe can it diſtil forth than a volatile *Acid*? that is, the ſame Spirit of Salt which the *Alcaly* had abſorbed and drunk up: Famous and Learned men have commended this Spirit in the *Gout* and *Stone*, as a ſingular Remedy, but the ſucceſs hath not anſwered: But *Baſilius*, ill interpreted and underſtood, wrote not to Impoſtors, and therefore he is wrongfully accuſed by them for a Cheat: Rightly therefore doth the *Comœdian* commend us, *If thou be wiſe, make thy ſelf ignorant of what thou knoweſt.*

An Addition to this *Examen*.

Nature, as to Phyſick, hath nothing occult in this ſublunary Globe; but by this method an *Hippocratiſt* may diſcover it.

By this Method (after you are once inſtructed in this *Hippocratical* Learning which I hold forth in this ſhort Tract) you may in every Proceſs, as well Chymical as Medicinal, by ingenuity and diſcourſe, diſcern, prove, and ſeparate Truth from Falſhood, without any expence or loſs of time, ſo as no longer to be gulled by Deceivers and Cheats; yea, by the ſame method you may in your Operations, and in writing of Books, travel on perpetually the right way (without wandering) in this Natural, Chymical, True, and Ancient Philoſophy, through all the three Kingdoms, Animal, Mineral, and Vegetable, as you will confeſs in the Progreſs.

CHAP. VII.

Qui bene diſtinguit, bene docet.
To diſtinguiſh well, is to teach well.

FOr our clearer light and underſtanding, it will be worth the while, before I proceed, to demonſtrate to the Eye the difference of *Alcalyes*, and to ſhew what the contrariety, or the abſorbing and imbibing of *Acids* is? There are, as I have ſaid, ſeveral degrees and Species of fix'd Salt-*Alcaly*, as of *Tartar*, which hath a ſingular priviledge, of Lime-trees, of Hazel, of all ſorts of Oake, and thoſe which in the Forreſts of *Norway*, *Lituania*, and *Muſcovy*, are burnt out of green wood in-

to

to Pot-ashes: Also all hot and Oily Herbs, as *Rosemary*, *Lavender*, *Rue*, &c. all of them, in a word, are contrary to, and destroyers of *Acids*, whose difference the following Experiments shew.

Dissolve an ounce and half of sublimate *Mercury* (which by the * mixture is changed from *Acid* and *Alcaly* into Salt) into fifty ounces of common water distilled: into a part of this clear solution, infuse by drops, yet somewhat quickly, the fixed *Alcaly* of *Tartar* (which is the Liquor of *Tartar* resolved of its own accord) this in a moment divides the *Compositum*, absorbing the *Acid*, and the *Mercury* presently goes to the bottom of a colour obscurely red.

* *Hip. l. 2. de Diæt.*

From the Calcined *Feces*, or Lees of Vinegar, there is drawn forth with water, *Alcaly* of *Tartar*, which though produced out of the same Vine with Wine, yet it precipitates a *Mercury* sparkling and splendent.

The wonderful difference of fix'd *Alcaly*.

But when the same *Alcaly* is Calcined by Art to a redness, then the same *Mercury* falls down like pounded *Cinnabar*.

The *Tartar* being burnt up, if you add the *Calx*, and draw forth the *Alcaly* with simple water, then the falling *Mercury* glisters like Gold; but extracted out of the Herb *Kaly*, it precipitates a *Mercury*, much more dark coloured than the former: The *Lye*, or *Lixivium*, which Soap-boilers call (*Magistra*) which consists of the *Calx*, and *Alcaly* of Oaks, yields *Mercury* darkly yellow.

There is an *Alcaly* brought out of *Spain*, 'tis not certain whether a simple or compounded one, which yet precipitates *Mercury* of a Tawney yellow colour.

But when the same *Mercury* is precipitated with *Alcalyes* of *Cephalick* Herbs, as of *Rosemary*, *Lavender*, &c. these indeed are *Alcalyes*, but not of Ashes, as the former, but much more volatile: These, I say, cast *Mercury* red and shining.

So *Celandine* hath a wonderful *Alcaly* (so that its fifth Essence (which yet I take to be the Gift of Heaven)

He which hath not tasted the relish of Salts, shall never attain to the desired Ferment of Ferments, says the Author of the *Rosary*.

Arsenick, called by *Paracelsus* the Soot of Metals, fixed with *Nitre* and resolved, is not excepted.

Balsamus Sameth.

ven) (i.e.) the *Alcalized* Liquor of this Spirittual Salt is praised, not without a Mystery, by *Paracelsus* and *Lully*) and it casts a most red *Mercury*. I once carelessly neglected the small Vessel in which 'twas put, and caused it not to be washed, and about a Month after, at the top of the Liquor there appeared a Golden Flower, not unlike the Flower of *Celandine*, (it was chamfered in its Coalition, like *Nitre*) to the wonderment of the beholders.

These Examples do shew, that by how much *Alcaly* is fuller of Fire, the *Mercury* falls so much the darker, because that in the very instant of absorbing, the Fiery *Alcaly* affects and flashes against its Sulphur like Lightning; but the further it recedes from Ignipotence, the *Mercury* falls the brighter: so that volatile *Alcalyes*, as of Soot, and of all Animals, from the aforesaid Solution, do precipitate *Mercury* of a white and snowy colour; all which will more clearly appear in the Progress. So *Mercury* precipitated from the *Balsam Sameth*, casts a snowy colour, somewhat inclining to yellow; but if you pour on more than its Nature can bear, then it turns to a glittering colour.

But salt things, of what kind soever, do not precipitate *Mercury* out of the above-named solution; yea, by how much the nearer they approach to the nature of Salts, so much the less they hurt *Acids*.

Examples follow.

Alcaly of *Saltpeter*, though its first Original be from *Alcaly* of Urine, yet with *Sulphur* being fix'd into *Alcaly*, (and therefore it casts somewhat saltish) it somewhat disturbs the *Mercury* so dissolved, but doth not precipitate it; but if you add to this Powdered mixture, before it doth deflagrate, and leave burning, a certain fixed and dried *Alcaly* (of *Tartar*) and keep it over a gentle fire, then first it melts the *Sulphur*, and the pinguedinous *Acid* of the *Sulphur* preparing for its flight, is greedily imbibed or drunk in by the *Alcaly*, which is also pinguedinous, as it happens in the preparation of *Lac Sulphuris* the moist way. The heat still continuing, the *Nitre* also is melted, whose sulphureous and inflamable part is associated

ciated to its like, *viz.* to the *Pinguedo* of the Sulphur; yea it is greedily received in by the *Alcaly* (a middle part of which is ſufficient, in reſpect of the Powders, as of * *Nitre* three parts, of *Alcaly* of *Tartar* two parts, of *Sulphur* one part) and ſo becomes Salt. In this Salt maſs, each of the Sulphurs doth boil, or bubble up, and the fire continuing, and being increaſed, they take flame, which in the kindling, not enduring the narrowneſs of place in the Salt, burſts out into the Air with a noiſe like Thunder: That theſe things are ſo, the *Alcaly*, which is ſometime left behind, may inform us, eſpecially when it is kindled not in a Concave, but in a plain place, and very leiſurely; for then it is changed by the *Acid* Spirits into Salt, and doth not any longer precipitate *Mercury*. Hence by the way we may learn, that

* *Sal Fulminans.*

This is the ground why *Ceraunocryſon*, or *Aurum Fulminans* gives a crack, or loud noiſe.

Aurum Fulminans.

I have elſewhere ſhewed that the Spirit of *Nitre* in *Alcaly* is made *Nitre* of *Tartar*. Gold is almoſt all Sulphur (after its own ſort and manner) as I have alſo experimentally demonſtrated in its place; for which reaſon it is not corroded by *Acids*. Gold therefore being diſſolved in ſalt water of *Nitre*, *Allum*, and *Sal Armoniack*, or common Salt, if you pour in by little and little (not all at once) a *certain Alcaly*, the *Acid* Spirit of the *Nitre* (for the Spirit of *Allom* or *Vitriol* in the diſtillation of *Aqua fortis* doth not aſcend) takes to it ſelf a Body in the vacuous and empty *Alcaly*, and ſo becomes natural *Nitre*; but the ſulphurous *Nitre* eaſily adheres (*via humida*) to the ſulphurous *Gold, becauſe of the ſimilitude between them; and they are ſo throughly mix'd together, that by no art of Ablution they can be ſeparated (*i. e.*) when the *Acid* of *Nitre* is imbibed by the *Alcaly*, it is coagulated into natural *Nitre*, which finds the Sulphur in the diſſolved Gold, and with it, as being of the ſame nature, to uſe *Hippocrates*'s words, it receives coagulation, as I have ſhewed in *Calx*: But if you pour on more of the *Alcaly*, ſo that it exceed the degree of *Nitre*, then the *Nitre* alſo inclines and deflects to the

* This is the cauſe that Gold diſſolved in Spirit of Salt, and the ſame fore-cited *Alcaly precipitat*, is not *fulminans*, for it returns to Salt, which reſiſts the flame.

nature of *Alcaly*, and it can no longer be called *Aurum Fulminans*, of which more anon. But to return from this digreſſion.

So alſo *Fel Vitri* * contracts the ſame reliſh, becoming Salt from the Acidity of the Flint, for it doth not precipitate *Mercury* at all.

* *Anat. Croll. in Lapide mirabilem.*

Liquor of *Talck* (not Oyl, as the ignorant vulgar think, for it conceives not flame) ſtirs not *Mercury* at all; as neither do Salts from all Diuretick Herbs, as Bean-ſtalks, Broom, S. *John's* Wort, Rupture Wort, Nettles, *&c.* all theſe, I ſay, are Acid-ſalt, and do not precipitate *Mercury* from the ſaid Solution; but when they are Alcalized by a quick flame or Fuſion, then the *Mercury* falls down reddiſh.

Hence it appears, that that moſt Learned Man of the Ancients, who taught us to extinguiſh red hot Glaſs in the Aſhes of Bean-ſtalks, and not in its Salt, did rightly inſtitute the burning thereof, and not according to the Doctrine of our unskilful Reformer, leſt the Salt ſhould unadviſedly aſſume the nature of *Alcaly*, of which I have ſpoken before in the fifth Chapter.

The ſalts of the Aſhes of vulnerary Herbs, ſuch as Bettony, Agrimony, Winter-green, Elatine, Star-wort, Sanicle, *&c.* all yielding a tart Salt, are therefore unfit for vitrification, and do not precipitate *Mercury*, which is of the ſame taſte, as ſhall be ſhewed in its place: But all the aforeſaid Salts, by the fire of Fuſion, do change their nature, and become *Alcalyes*, are vitrified, and do precipitate *Mercury* of a ſparkling colour: Hence *Zour* upon *Exodus* obſerves, that Glaſs is made of any Aſhes, (*i.e.*) when they are reduced to *Alcaly*.

Conſtancy of Salt in the Fire.

Common Salt doth not precipitate *Mercury*, from the above-mentioned Solution, yea, although it be burnt a long time, and with a quick flame, it would never become *Alcaly*, neither doth it change its nature by digeſtion; wherefore it is the perfecteſt of all Salts, and by a ſingular priviledge is called by *Helmont*, *The excellenteſt of Salts*. So Salt of Vipers doth not precipitate *Mercury*, unleſs the *Acid* and the *Alcaly* be again ſeparated one from the other, of which hereafter.

Salt

Salt of Wormwood, being Acid-salt, doth not for that reason precipitate *Mercury*, neither doth it absorb Spirit of *Vitriol*, as the Reformer teaches under the Title of *Coagulated Spirit of Vitriol*; but when it is Alcalized, it precipitates *Mercury* yellow, and then also it absorbs the Acid Spirit of *Vitriol*, and vitrifies. *Pharmacop. f. 788.*

Hence we learn, that in a fire stronger than the nature of the thing will bear, Salts will be fixed, and converted into a Neutral thing; wherefore many things are produced by the sole Regiment of Fire, not as if they were entirely generated anew, and brought forth to light for increase (as the vulgar, being ignorant of this *Hippocratical* Learning, do suppose) but only by a simple alteration of the Subject, as my *Hippocrates* shews; and they also know, who have skill to make an Harmonious Conjunction between the External and Internal. *L. 1. de Diæt.*

So also, without the help of Fire, Salts are changed from their natural temper; as for example, mingle Liquor of Salt of Wormwood, not Alcalized, with Rosemary, and the Solution becomes milky, both of them being coagulated into a Neutral thing.

On this Foundation stands the Process of the *Febrifuge* Medicine of *Lazarus Riverius*, hitherto known to few; but I shall crave leave a little more clearly to explain it, know then, that it is made of one only Subject representing *Alcaly*, and two *Acids*, all of them not having yet undergone the Fire, but by Exaltation so often repeated, till you see it again changed from blackness into a most white, volatile, artificial Salt, not unpleasant to the taste, to which afterwards the fourth *Athleta* is added (*i.e.*) *Scammony*, as appears in the Process. But who can enumerate all the Metamorphoses which arise from the mixture of Salts; some of them assuming one form, some another, by their mutual mixtures, as *Hippocrates* teaches. *Riverius Febrifuge.* *L. 1. de Diæt.*

It is to be observed, that Salt of Soot having its Original from the stock of vegetables, doth precipitate *Mercury* from the aforesaid Solution white, spongy, and light, as do the volatile *Alcalyes* of all Animals, as shall be said anon; but if they are converted into Salts, then the *Mercury* falls no more. *Alcaly of Soot is made Salt.*

Hence we may conclude, that almoſt all oily Herbs, and ſuch as are counted hot and pingueous, do yield *Sal Alcaly* by a light and ſimple Incineration; to which if the *Hippocratiſt* renders its proper *Pinguedo*, by an hidden Coction, they are converted into an admirable Salt, which is then called by our Chymiſts *(Elixir Parvum)* and is of great * vertue in Phyſick, of which in its place. The ſalts of other Herbs do degenerate and turn into imperfectly Salt, or into *Acids*, and by a quick flame, or the fire of Fuſion, are reduced into vitrifying *Alcaly*.

* See *Ripley, Bacon, &c.*

CHAP. VIII.

The Foundirs Art doth further ſhew, that Alcalyes *and* Acids *are abſorbed.*

ALl Minerals, of what kind ſoever, having in them hidden Metalline Bodies, are joyned with *Acids*, (*i.e.*) Sulphur of ſeveral ſorts, which do hinder the Metal from being purged from the impurity of the Mines. In this ſtreight, it is needful to have recourſe to *Alcalyes*, which do the work ſpeedily: Reducing therefore the Mineral to Powder, they mix it with *Alcaly*, and melt it in a Crucible; the Fuſion is accelerated by *Nitre*, which is kindled with the Sulphur, as part burns away, ſo part with the *Tartar* is turned into *Alcaly*; that *Alcaly* abſorbs all the *Acid*, with which otherwiſe all the Metal would fly away; but this way it eaſily goes to bottom, and that Artiſts call *Regulus* (*i. e.*) pure Metal, free from Sulphur, which again under a Probatory cuppell with Lead they further purifie, for which you may conſult the Say-maſters and Refiners, it being my intent to ſpeak only of the Foundation of Salts.

Silver flies away with *Acid* Minerals.

I have told you, that Metals are turned by Acid Minerals into Fume, which is manifeſt in Silver melted with Lead in an Earthen Pot made of Pot-aſhes; put the Sulphur piece-meal into it, whoſe acidity as it flies away, it alſo expels the Metal, which you may gather up again with a moiſt Linnen Cloth ſpread abroad in the Chimney.

Another

Another Experiment to prove that Metals are carried off by the Acid Mineral, is, that *Cement*, which is called *Regale*, which is made of common ſalt, and Powder of Bricks, with which they ſtratifie or ſpread over Gold Money bound in with Copper: In this Cement the Gold, without Fuſion, diſmiſſes the Copper, and together with the Acid Spirit of Salt, vaniſhes to ſmoak, which yet carries off with it ſomething of the Gold; but when the Acid Spirit, being loaded with the Gold, aſſays to paſs through the Earthen Covers, the Gold is precipitated, and ſticks to the Covers, whiles the Spirit corrodes them, which are afterwards pounded together with Quick-ſilver and water: This recollects the Gold, and reſtores it to his Maſter, when it is ſeparated from it through Leather.

Gold flies off with the *Acid* Mineral.

As Minerals bearing Metals are precipitated into *Regulus*, the ſame way is *Regulus* of *Antimony* precipitated (*i. e.*) with *Tartar* and *Nitre*, becauſe the *Alcaly* of *Tartar* imbibes the Acid Sulphur from the *Antimony*, and ſegregates the pure *Regulus*.

Regulus Antimony.

Antimony is alſo melted with common Salt, but the Acidity of this latter doth corrode the *Antimony* in the vehemency of the fire, and it is raiſed into bubbles, and ſo leſs *Regulus* falls. Theſe examples concerning precipitation the *dry way*, may ſuffice.

So any *Alcaly* being diſſolved in water (which is called the *moiſt way*) as it always drinks up the Acid, it alſo cleanſes *Salt-peter* from every Acid, which therefore the ableſt Phyſicians do chuſe for a great cooler in the *Quinzey*; for which reaſon it is called *Sal Prunellæ*. A certain dull Fryar hearing *Sal Prunella* to be commanded by Chymiſts, came by night to a skilful Apothecary, and demanded of him whether this *Sal Prunellæ* were extracted out of Sloes, or Garden Plums; yet theſe are the men who would be accounted by vulgar Ideots and ſilly women, the only *Regular Practicioners*: I ſay, they boil * *Nitre* in Alcalized Lye, till a drop ſtands on cold Iron like Suet; then they ſet it aſide in a cool place without pouring it into any other Veſſel, and in a night ſuffer it to concrete into moſt clear and pure

* *Nitre* burnt with *Sulphur*, doth more hurt than good in a *Quinzey*, for it becomes ſalt.

Flakes, which the next morning they wash off; for the *Alcaly* hath drunk up all the hurtful and impure *Acid* from it, *as it happens also in mans body*, as *Hippocrates* shews in his first Book of *Diet*.

CHAP. IX.

The Prerogative and Priviledge of Alcaly *of* Tartar.

I Have mentioned already, that amongst the fixeder sort of *Alcalyes*, Salt of *Tartar* is endued with a singular priviledge; for though it be an heavy Body, terrestrial, impure, and mixed with filth, yet being digested with any Metal whatsoever, in a due space of time, it turns it into running *Mercury*. Having experimented this, I affirm it for a truth to convince the incredulous; but if any refuse to believe it, I am not much solicitous.

Gold is almost all *Sulphur*, and gives the least *Mercury* of all.

A Friend of mine endeavouring to obtain *Tartar* from generous, mature, and clear Wine, did elicit and draw forth the Spirit, and suffered the Phlegme to exhale; the remainder being thick as a Syrup, he permitted to concrete in a cold place, into *Pellucid Tartar*, which he burnt; and as the custom is, with common water extracted the *Alcaly*, which he suffered to run down into a Liquor of its own accord. A sudden occasion offering it self, that he was to go to *Rome* with a certain great man; to the end that the precious Liquor might not be lost in the interim, he commanded his Servant to preserve it in a Vessel which he appointed and shewed him for that purpose; his Servant, by a mistake, poured it into a Neighbours Vessel, like the former, in which Silver was which had been dissolved in *Aqua fortis*, to which *Sal Armoniack* sublimated and dissolved in distilled Vinegar (begun for another work) had been added: My Friend returning after nine Months, and seeking for the Liquor of *Tartar*, he found the Cucurbite into which his Servant was injoyned to put it, quite empty: The Servant answering, that he had poured it into a Neighbours

bours Veſſel, looking there, he found not the Liquor, but dry Earth (nine Months exſiccated) which he touched with his Rod, and a great part of the running *Mercury* diſcovered it ſelf; at that time he could not believe that running *Mercury* could be made out of perfect Metals, being ſo perſwaded, according to the Axiom, *That it is eaſier to make, than to deſtroy perfect Metals*, which made him neglect the Experiment, imagining in himſelf, that the *Mercury* had fallen into the Veſſel by ſome chance. But at length he learned out of *Baſilius Valentinus*, that Salt of *Tartar* hath this priviledge above all other Salts.

Mercury out of Silver.

The ingenious *Helmont* hath confirmed this Experiment in theſe words; *I have found*, ſays he, *that the Crudity of* Saturn *is diſſolveable by the fat of fixed Salts, and that the parts of the* Compoſitum *are ſo divided, that it ſuffers Silver to run crude.*

Tract. poteſt Medic. S. 4.

There came then to my mind a ſtrong *Lixivium*, wherewith old women boil *Litarge* to black their hair (of which *Porta* alſo makes mention in his *Magia Naturalis*) into which I dropped Spirit of *Vitriol*, and preſently the *Alcaly* ſuffered the Metal to run into a white Powder, which I reduced into Lead; by which means, I knew for certain, that *Alcalyes* do inviſibly contain and hide in their Bowels Calcined Metals.



This Experiment being made, *Helmont* goes on, ſaying, *That calcined things are moſt ſharp, but they are dulcerated with diſſolved* Sal Armoniack *and putrified* Tartar; *(i.e.)* they are turned into running *Mercury*, which is not any longer tart or biting, as Calcined things are, but inſipid to the taſte.

I return now to the Salt of *Tartar*, which in form of Liquor was poured into the *Cucurbite*, in which was Silver corroded by *Aqua fortis*, with *Sal Armoniack*: All theſe changed their nature into Neutral Salts, different from their former ſtate; ſo the Silver made no more any ſhew of Silver, of which * *Baſilius de Tartaro.*

* *Litr. de magno mundi. Mirac.*

Durch, &c. *By my Spirit they take revenge, and break (or diſſolve) all Metals.* For as all Sublunary Bodies (Experience being witneſs) do conſiſt of two things, *Acid* and *Alcaly*

Alcaly (as I ſhall mechanically ſhew in this Tract) the ſame may be ſaid of Silver: from this Silver the *Alcaly* of *Tartar*, by due digeſtion and coction, hath abſorbed ſo much of the *Acid* Sulphur, as was ſufficient for the *Mercury* in the ſtate of Silver (now it being ſegregated and divided from it) for its conſtancy; into the place of *Mercury*, ſucceeds the *Alcaly* (Philoſophers call it *Adulterium*) which it imbraces from the Silver; and therefore loſeth its form and beauty, and changeth its nature, ſo that it is melted even with the gentleſt fire, as Lead or *Sal Armoniack* mix'd with the *Calx* of Flints, and it is called by *Crollius*, *Luna Cornea*, becauſe it may be cut with a Knife like Horn. This *Luna Cornea*, though it be waſhed an hundred times with hot water, and * melted with a ſwift Flux from *Tartar* and *Nitre*, yet it is impoſſible to ſeparate them one from the other, unleſs in *Balneo Saturni*, in which that of the Silver which remains, returns to pure, but the Salts, with the Lead, into droſs and Litarge; which alſo again, by ſimple Fuſion, is reduced into Lead; but the droſs, which were Salts, are hurried into Element together, with the Sulphur of Silver, which they had abſorbed.

Diana nuda.

Luna Cornea.

* As I have elſewhe e ſaid of *Fuxum Fulminans.*

CHAP. X.

That the Bodies of Alcalyes *are* Vacua, *proved by examples.*

A *Vacuum* in Nature demonſtrated by Art.

WHerefore Salt of *Tartar* is a *Medium*, wherein not only Metals, but Minerals alſo do revive and obtain, as it were, a Reſurrection, though by Art, and a ſtrong fire, they ſeem quite deſtroyed. Pour Spirit of *Vitriol*, drop by drop, upon diſſolved Salt of *Tartar*, till the hiſſing noiſe ceaſe; reduce the Liquor into Chryſtals, or dry it all up, and you ſhall find a Salt, having the nature of *Vitriol*, it provokes vomit, and being ſuperbibed, purges by Stool, as white *Vitriol* is wont to do: It is mingled with *Nitre* and *Quick-ſilver*, 'tis ſublimated into red, to which add common Salt, and it becomes a Corroſive Sublimate; it is diſtilled *per ſe* as *Vitriol*:

Regeneration of *Vitriol.*

triol: The whitish Mucilage subsiding in the bottom, is the same *Fax*, which in dissolved crude *Vitriol*, by the affusion of Salt of *Tartar*, falls down black: It endures the fire, and resisteth fusion; as the *Colcothar*, or *Caput mortuum* of *Vitriol*, which yet without the affusion of Spirit of *Vitriol* was easily melted: That fixed Salt is *Vitriol Regenerated*, called by the Writers of the Rudiments of Chymistry, *Tartarus Vitriolatus*, and *Universale digestivum*. It is made much more excellent and perfect from crude *Vitriol* dissolved in water, and Liquor of *Tartar* poured upon it, until it cease to be troubled, which point of Saturation is not found without difficulty, for if it exceed but one drop, it turns the mixture either into *Vitriol* or *Alcaly*, of which my *Hippocrates*, *Nunquam simul in eodem consistunt*; coagulate the clear Liquor into shining Chrystals: This is more Noble than the former, because in distilling the *Vitriol*, the violence of the fire elevates the *Liquamen* of the Copper, and mixes it with the Spirit, so that it becomes troublesome to the Stomach. But in this simple way, the *Alcaly* consumes only that most simple Natural *Acid*, which corroded the embrionated Metal in its Flux. This is that simple *Acid*, agreeable to our Nature, in *Acid* Fountains, refreshing the Drinkers, and acceptable to the Stomach, though taken in great quantity; of this I determine to speak briefly; yet * *Paracelsus* relates, that in a Village called *Vidin* in *Helvetia*, there is a Fountain, the like whereto is not to be found in the whole World.

L. 1. de Diet.

* *De morbis Tartaris.*

So also Spirit of *Nitre* re-assumes a Body in Salt of *Tartar*, and becomes cold natural *Nitre*, conceiving flame, and is a Remedy for the *Quinzey*, which otherwise being separated are Caustick, as I have shewed in *Aurum Fulminans*. If you add Spirit of Salt to the same Salt of *Tartar*, then, after Coagulation, it becomes common Salt, as it was before it was turned by a strong fire into Spirit; and therefore, since the *Acid* Spirit of Salt by solution returns to Salt, we may cease our wonderment, why amongst all *Acid* Spirits, no other dissolves Gold, but that of Salt? because that by Corrosion it re-assumes the Nature of Salt, even as the water common-

Regeneration of *Nitre*.

Regeneration of common Salt.

Of *Acid* Spirits, only Spirit of Salt dissolves Gold, and why?

ly called *Aqua Regia*, which without Salt touches not the Gold at all.

Tartarus Regeneratus by some improperly called *Tinctura Philosophorum.*

The same Salt of *Tartar*, if it hath imbibed Vinegar distilled from Wine; is made common *Tartar* of Wine, having all the properties thereof, excepting only that *in humido* it doth more easily melt: Cleanse this Regenerated *Tartar*, by solution, from all its impurity, and afterwards distil it with a strong fire through a Glass retort placed in Sand, and you shall obtain an Oyl, and bitter Liquor, as that which is elicited from crude *Tartar*, yet the Oyl somewhat resembles the goodness of the Wine, of which the Vinegar was made. 'Tis almost incredible to be spoken, that distilled Vinegar should contain in it an occult fatness, and yet it is very true; but Salt of *Tartar* hath not this pinguedo, for it is fixed and tryed in the fire. At *Rome*, from one Ounce of this Regenerated *Tartar*, I drew forth six Drachmes of Oyl, of an Orange colour, and grateful smell; but at *Venice*, a pound scarce afforded me one Drachme, and that black, coloured, and stinking: I say, it is even incredible, that in Vinegar, not only the qualities of the Wine, but of the Country where it grows, should manifest themselves. From what hath been said, it appears, that *Acids* do attract *Alcalyes* at their pleasure, and rule over them as they list.

Distilled Vinegar becomes fat Oyl, conceiving flame.

What more pleasant than to know, those things, and to see them with our eyes, and handle them with our hands under a grateful silence, which common sense doth not apprehend, and by nature are put remote from us.

In like manner it reduces Oyls, either distilled or expressed, into their first Elements; for they being mixed in a just proportion *(i.e.)* to satiety with Salt of *Tartar*, and digested afterwards out of a Glass retort placed in Sand, one Moity returns Oyl, the other Moity is water. Again mix this Oyl with new Salt of *Tartar*, as above, repeat the distillation, and you will see all the Oyl converted into water, a little Earth being left with the *Tartar*, which you shall know increased in weight; so that Oyl, which otherwise is wholly inflamable, here you may find turned into odoriferous water; and again distilling this water out of a Glass, you will extract *Aqua Ardens*, which again, with Salt of *Tartar*, returns to *Alcaly*, and afterwards into Elementary water, like that which remained in the Glass.

Oyl made water.

Oyl made *Aqua Ardens.*

Aqua Ardens made *Alcaly*, and Elementary water.

There

There were two pound of the remaining Salt of *Tartar* in the Retort, which I laid upon an Iron Board or Slate, that it might run into a pellucid Liquor: I diſtilled all the Humidity out of the Retort placed in Sand, and breaking the Veſſel, I again diſſolved in the Air the Salt, which was in the bottom, upon the Iron Slate (which is not prejudiced at all) which is done in about forty hours ſpace, and there remained nothing on the Slate beſides a little ſlimy *Fæx*. I again diſtilled the Liquor, encreaſing the fire, as before, till nothing came forth, either dropping or ſmoaking, and I again diſſolved the ſame Salt, having broken the Retort, on the Iron Slate; I renewed theſe Operations twelve times, and all the Salt of *Tartar* was turned into the Element of water: I gathered up the *Faces* which were left each time on the Slate, and I extracted all the ſaltneſs from the diſtilled water, with which I made the ſame Proceſs, as before; ſo that all the Salt of *Tartar*, as the Vinegar, Oyl, and *Aqua Ardens*, were turned into inſipid water, and *Terra Mortua*, of no ſavour or ſmell; which Earth and Water, a little before, ſeemed Cauſtical. 'Tis a wonder to conſider, what becomes of this Fiery Vital power and vertue, both of the Oyl, Vinegar, and *Aqua Ardens*, as alſo of the Salt of *Tartar*; yet this vertue or form perſiſted conſtant in the fire, until the reduction into the Elements; I now call it the *Rector*, for our clearer underſtanding of it, of which more particularly in its place: You may call it as you pleaſe, either *Fire*, *Form*, *Archeus*, 'tis all one to me; *All are like, though they appear unlike*, as *Hippocrates* affirms. If the Reformer had had any knowledge of fixed *Alcalyes*, he had never preſcribed to Podagrical perſons *Oyl of Venice Soap*, for whatſoever of Oyl diſtils from Soap, is like that from Brick, and contains nothing of *Alcaly*: So alſo, they who diſſolve the Body of Soap, and ſay, that it is good for gouty diſeaſes, are in a great miſtake; the taſte may be an Omen of their diſappointment which is found manifeſtly ſalt; for it doth not precipitate *Mercury* from the above-mentioned ſolution.

Salt of *Tartar* turned into ſimple Elements.

L. 1 de Diæt. In Append. ad animad. f. 84.

Wherefore the *Alcaly* of *Tartar* ſeems to bear a re-

presentation of the Philosophers Chaos, wherein they say their *Mercury* hath a Resurrection; of which *Paracelsus*. *The Regeneration*, says he, and *Renovation of Metals is thus made: as man returns to the Earth whence he was first taken, and so shall be again Regenerated at the last day: So also Metals may again return to* Mercury *(of which they were first derived) and be dissolved with it, and re-become* Mercury; *and again by fire (which also shall judge the World) be re-produced and clarified. This way* (as he goes on) *are stones Regenerated, and also special tinctures of Silver and Gold.* Thus far *Paracelsus*. In the mean while, I would not advise any man to perswade himself, that Salt of *Tartar*, after whatsoever manner prepared, is the Catholick Chaos of the Philosophers, though Metals in it may return into running *Mercury*. 'Tis enough in short to have advertised this.

L. 1. de natura rerum.

Of which see *Roger Bacon, Ripley, Isaac Holland*, yet read them with caution.

But I am enjoyned silence by *Harpocrates*, concerning fixed Salt of *Tartar*, lest I should be injurious to the curious disquisitions of Learned men, who have spent much labour and pains to attain the full knowledge thereof, it being a Medium giving vivification to many things. *Basilius, Paracelsus*, and others, have taken great notice of it, who have stript it of its cloathing, and have chosen it for a Dissolver, seeing it doth illuminate and vivifie its objects, almost after the same manner, as the fixed Alcaly of Herbs extracts from Calcined Flint another, and like Alcaly; which it is not possible to elicite by any other vapour, than by its like; and it makes it much more powerful, and turns it into a nature truly fiery; so that we ought to make our progress from things known to things unknown, as *Aristotle* rightly adviseth.

Alkaens example deters me.

The Academical Spirit understands not this Mystery.

This is that which *John Baptista van Helmont* makes a noyse about, *Learn*, says he, *a dissolvent, which is always the same, and you have attained the inward Essences of things, which he proves by an example*, demanding, why Lapis Ossifragus *fix'd, not Calcineable, should cure a broken bone taken by the mouth, and yet not the Stone, or the Gout?* I answer this Worthy Man thus, that the ridiculous *Alkahest* of the Reformer, and the *secret solvent*, are nothing

De Febr. c. 17. v. 25

Tract. de verbis herbis, & lapidibus.

thing but Vinegar diſtilled from *Æruge*. And although it corrodes the *Oſteocolla* Stone, yet the Stone by the corroſion acquires the properties of Vinegar; whence it comes to paſs, that it reaches not to the Urinary places, but is preſently precipitated in the Stomach, as hereafter ſhall be demonſtrated to the eye. *Append. ad Animadv. f. 72.*

Wherefore hitherto, Salt of *Tartar* hath plaid its part in its mean dreſs, but when it is diſpoiled of its Garments by the hand of a Philoſopher, ſo as to appear in its naked, lucid, and reſplendent form, then it reduces the things which are committed to it, into the ſame, or a matter like it ſelf (I remember having once preſcribed Crabs Eyes, ſo diſſolved, to a Woman in a long *Quotidian* Ague, which could not endure Phyſical Potions, a Timid Canonical Phyſician then preſent, interrupted me, ſaying, it was a Mineral, and full of danger) and becauſe it is without form, as all Alcalyes are, it aſſumes the form of that with which it is united (for *Sal Tartari* is a middle thing between a Mineral and a Vegetable, and therefore eaſily comprehends the nature of them both) and ſo goes forward. Thus much is ſufficient to have pointed at the differences of fixed Alcalyes. He that knows little, fears much.

CHAP. XI.

Concerning the Volatile Alcaly *of Animals.*

AS fixed Alcalyes do abſorb all Acids, and according to the nature of the Acid are changed into Salt, as I ſhewed above; ſo alſo the Volatile Alcalyes of all Animals, from whatſoever parts of them extracted, are likewiſe turned into Salt, imitating the property of the Acid; and as Urine contains a Volatile Alcaly by the ferment of putrefaction, ſo do Sweat, Blood, Fleſh, and Bones of all living Creatures, by a diverſe ferment, every one according to the vertue, innate to the place. And as I have ſhewed the intrinſick difference of fixed Alcalyes with *Mercury* ſublimate reſolved, and the ſingular Prerogative of Salt of *Tartar*, ſo touching theſe Volatile Al- What *Ferment* is, I will ſhew anon.

calyes, I will go on to demonſtrate in my progreſs, their peculiar priviledges and endowments. The Alcaly of all Animals, of Urine, of Blood, of Sweat, (yea of the Stones of all Animals) of Serpents, of Frogs, &c. do præcipitate a white Mercury out of the aforeſaid ſolution, ſo that by this Mechanical Method, you can diſcern no difference, and by conſequence this Alcaly is not of a Salt taſte, as the Reformer preſuming on his own opinion, hath taught; for Salt things, as I have ſhewn, do not præcipitate Mercury out of the aforeſaid ſolution, but it receives a form, according to the property of the Acid, as will more clearly appear in the progreſs.

The Alcaly of all Animals are alike, and empty Bodies.

The Ancients took notice of this fundamental and ſpecifick difference (which they call *Occult.*) I ſay, they obſerved, that Volatile Alcaly drinks up as much of *Sal Armoniack* as is ſufficient for its conſtancy and ſaturity, for artificial *Sal Armoniack*, ſo that the Alcaly of Urine and the Acid part of the aforeſaid Salt, do ſo ſtrictly embrace one another, that *per ſe*, they cannot be ſeparated; for the Salt of Urine, in the torture of the Fire, ſeeking to eſcape, carries away with it the Acid part, which it had abſorbed, and they are both ſublimated together into artificial *Sal Armoniack*.

The occult quality is the Ferment of the place, of which hereafter.

Artificial *Sal Armoniack*

Now, that Common Salt, either Ours, or the *Armoniack* of the Ancients, hath an Acid part, communicable out of the Fire; is proved by this Experiment; *viz.* Drop Liquor of Tartar upon Salt, when it is reſolved, and in a few moments, you ſhall ſee the earthy part to be ſeparated, and the Alcaly of Tartar to embrace the Acid, of which more plainly hereafter: So, without the Art of Diſtillation, the Ancients eſſayed to aſſociate the Alcaly of Vipers with Natural *Sal Armoniack*.

Common Salt is Acid Salt.

Wherefore the Ancients, after they had obſerved out of *Hippocrates* the occult difference of Volatile Alcalies (of Animals) and the Acidity of Common and Cireniack Salt, under the name of *Faculties*, they began to ſtratifie Vipers with Natural Sal-Cireniack or Armoniack, as *Pliny* ſaith, in the place before-cited (as they ſaw, concerning Urine and Salt) to the end that the Alcaly of Vipers might imbibe as much of the Acid Salt, as might ſuffice

L. 1 de Diæt.

L. 1. de Diæt.

ſuffice, for ſtopping its voluntary flight. This Compoſition, not altogether without cauſe, they then called *Sal Theriacale, Salt of Treacle*; becauſe they had learned, the Fleſh of Vipers to be good againſt many poiſons (yea by ſuch an ingenious Viperine Decoction, I have more than once cured the French Pox in Curious Perſons) and conſequently by reaſon of its ſeminal and mumial Ferment, that the Alcaly of Vipers, muſt contain the ſame Faculty.

This Contemplation of the Ancients is unworthily charged by the Reformer with *childiſhneſs and abſurdity*; He himſelf, being much more abſurd, as not underſtanding the memorable Inventions of our Anceſtors. F. 481. And whereas he caſts in their Teeth, *That they had not the Art of Purifying*. That indeed is true; but they are not therefore to be calumniated, nor detracted from, in point of Honour, much leſs to be ſcoffed at, for ſo my Maſter adviſes. Some Ages hence, perhaps this *Reformer* will be laughed at, for writing ſuch abſurd things in his Time; for occaſion will not be wanting many thouſand years hence, to find out, and learn newer and better things; *Becauſe Nature diſcovers not her ſecrets all at once, neither are they expoſed promiſcuouſly to the view of all, but are, as it were ſhut up in her inner Chappel, of which this Age brings forth, one thing; the Age following, another.* Sen. l. 7. Nat. Quæſt. c. 31. But let us hear my *Hippocrates* ſpeaking much more modeſtly of this thing; *'Tis an unworthy thing, to blame any one of them for not finding; all, are rather to be commended, for ſeeking and enquiring after.* L. 1 de Diæt.

Theſe things being prævioufly underſtood, let us now conſider; What excellence and prerogative, the *Viperine Salt* of this Reformer hath, above the Inventions of the Ancients, which yet, They prepared by an eaſie Operation; but He, with great charge, labour, pompous oſtentation and triumph.

The Alcaly of Vipers (under that Title, *Pharm. f.* 486.) diſtilled out of a Retort, drinks up the Acid Spirit of Common Salt, which I have ſhewed, with Alcaly added, to be ſeparable, without the Art of Diſtillation: from that Conjunction (*i. e.*) of the Acid Salt, and the Alcaly: The *Sal Viperverium* of the Reformer is Common Salt.

Alcaly of Vipers, is made Comon Salt. If we urge this Common Salt with Fire of Sand, it will be elevated into Artificial *Sal Armoniack*, as having all its properties, which is proved by this Experiment.

Pure Alcaly of Vipers.

Mingle the Powder of Salt of Tartar (*i. e.*) the Fixed Alcaly of Tartar, with an equal part of the Viperine Salt of our Reformer, diſtil this Mixture in a Retort, placed in Sand, and you ſhall preſently ſee the Alcaly of Vipers to aſcend by the neck of the Retort; becauſe the Fixed Alcaly of Tartar apprehends and catches the Acid Salt; then the Alcaly of Vipers, willingly leaves her Acid Companion, whileſt it is forced to fly away by Heat. Do the ſame with Common *Sal Armoniack*, and you ſhall find no difference; and therefore what the Ancients did with the Body of Salt, That the Reformer performs (with greater labour and coſt) with the Spirit of Salt; and if the Ancients *Sal Viperirum* be of no uſe, as he ſays, ſurely His, hath the ſame property.

Pure Alcaly of Urine.

But when, That Alcaly is expelled with Salt of Tartar from the Common *Sal Armoniack*, then you will have the pure and dry Spirit or Alcaly of Urine, which the Reformer moſt fooliſhly calls *Salt Spirit of Sal Armoniack*; as he alſo with the ſame ſottiſhneſs, calls that *Vinegar*, which he diſtilled from Meal mixed with *Sal Armoniack*, out of a Retort. *The Acid Spirit of Sal Armoniack*, adding withal this groſs miſtake, *Theſe two Spirits out of Sal Armoniack, the Acid and the Salt* (though both of them contain not a drop of *Sal Armoniack*) *though produced out of one Subject; yet are contrary one to another, and being joyned together, deſtroy one another; wherefore let the Apothecaries carefully diſtinguiſh between the Salts and Acids.* But the Reformer informs them very groſly concerning Taſtes, yea he preſumes to teach them; that, which he is ignorant of, himſelf; witneſs, amongſt many other things, **Aqua Mindereri*, for the Hearing.

*Append. ad Animad. f. 73, 74.

*The Water of *Mindererus* for the Hearing.

For this Water hath Urine and Vinegar for its Foundation; which mixture the Reformer doth not only diſallow, as believing, without further enquiry, *That the Salt and Acid, are deſtroyed by one another*; being ignorant,

rant, that the destruction of one, is the generation of another. Thus he huggs his own opinions as the Ape doth her Apelings, but also he aspersses a worthy Man with reproach and calumnies, who hath candidly communicated his experiences for the Publick good; notwithstanding which, the Reformer (after his manner) thus scribbles in his *Appendix*: *Besides many other Absurdities, I see Vinegar and Urine to be poured on, which are plainly contrary one to another; for the Urine of Animals distilled, yields a sharp Saline spirit, which is a destroyer of all Acetous spirits.* Thus he. *Ad Animadver. Fol. 336.*

Hitherto I have demonstrated, that the Volatile Salt of Urine is by no means Salt, but Alcalizate, and therefore being mixed with Acid, from them both, there arises a Salt tart Sapor; wherefore from the mixture of the Volatile Alcaly of Urine, and Distilled Vinegar (which two do never concrete,) there is made a distillable, salt, and most piercing Liquor, I question whether any thing be more subtle in nature (of a simple mixture) for an old Obstruction, For which cause the most Ingenious *Mindererus* rightly, and with good Judgment, commends and prescribes it for Thickness and Difficulty of Hearing; because it is salt as Sweat is, as shall be proved, and in regard of its Symbolicalness and congenious nature thereunto, this Distilled Salt and Volatile Water, pervades the membrane of the *Tympanum*; yea it is willingly admitted into it. I said this Spirit was Salt, which is proved by experience, for it doth not precipitate *Mercury*, from the often named Solution, as other salt things do not, which according to *Galen*'s opinion do cut, attenuate, and discuss the excrements, they dry, they support and strengthen Nature, and that in a rude lump of Salt, why may not then this most subtle Spirit be also Salt? Wherefore let the Skilful judg, whether the most Learned *Mindererus* be not unworthily blamed by Impostors. The Reformer understood *Hippocrates* but ill, who says, *That a Physician using reason for his guide, will never envyously calumniate another, for thereby he betrays the weakness of his own mind.* Now let us consider *Salt of Tartar*, which drinking up the Acid, had separated it from the Alcaly of Vipers, and remained

Without hurt or pain it pervades the *Cornea Tunica*, and dissolves the White-spots in the *Pupil*, left there by the *Small-Pox*. The ignorant carp at what they do not understand.

L. 6. Prat.

in the Retort, they call that (but improperly) *Caput mortuum*, especially that from common *Sal Armoniack*, from whence the Spirit or Urine hath been extracted. That *Caput Mortuum* is a compound of Acid and Alcaly, and will be doubtless of a salt relish, like the Viperine Salt of this Reformer, and common *Sal Armoniack*, as hath been said and shewed; and for confirmation thereof I will repeat another Experiment.

Dissolve the said *Caput Mortuum* in water; cause the fœces to go to the bottom, and coagulate the clear liquor with a gentle heat to a Siccity, and with *Bole Armoniack* in a four-fold proportion, mix it into a very fine powder; urge this with a naked Fire, from a Glass Retort luted, into a great Receiver, and the Acidness of the Salt, which found a body in the Alcaly of Tartar, by the power and heat of the fire is put to flight, but in the greatness of the heat, it flies not alone, because being absorbed by the fixed Alcaly, it carries off with it the fixed Salt of Tartar, so that from the Acid and Alcaly being mixed, and urged with a violent fire, there is extracted a Spirit Semi-Acid-Salt, which, as it is an artificial product from a various mixture, doth not precipitate *Mercury* from the aforesaid solution; yet it is not of it self unfit for Medicine, as neither for destroying certain Minerals; but one Operation being finished, part of the Tartar returns into the element of Water, and the Acidity of the *Sal Armoniack*, from the other part of the Tartar, cloaths it self with a new body, which is again sublimated and separated.

The Spirit of *Sal Armoniack* re-assumes a body in *Tartar*.

It may be demanded, why in this place a Spirit is elicited from the fixed Alcaly of Tartar and the Volatile Acid, whereas above from the Alcaly of Flints, and the Acid spirit of Salt, it succeeds not? To which I answer, that the Acrimony of the Salt of Tartar, in a fire, not very vehement, returns quite to nothing, as I have shewed elsewhere; and for this cause, with its associate, it is easily elevated into Spirit, but the Alcaly of Flints, is more fixed, which before it flies, is rather, with its adjunct, turned into Glass.

CHAP.

CHAP. XII.

How Volatile Alcaly is generated in an Animal, and the parts of it.

I Have said in the Examination of *Mindererus* his water, that *Sweat (by the Natural *Proto-Chymist*) is made Salt, as is also every compound of *Acid* and *Alcaly*, Urine not excepted; which this Operation shews.

*I call *Sweat*, either that insensibly transpiring, or that which makes wet; 'tis all one here.

Take that Lye, wherein foul Linnen Shirts have been steeped and washed, not boiled, put this Lye into a Glass of a long, narrow, and equal neck, set to a Limbeck at least carelessly, and place it in a digesting Bath or Sand, and in a few days you shall see the *Alcaly* of Sweat to ascend, yet not stinking, as That which is sublimated from Urine. This *Alcaly* could not be seperated from Sweat, unless its Salt relish were divided, which consists of *Acid* and *Alcaly*, both Volatiles, as I have shewed in *Mindererus* his Water, and elsewhere; so that the Lye is a Fixed *Alcaly*, absorbing the *Acid* part of the Sweat in the Heat of Digestion, and the fugitive *Alcaly* being divided from it, goes to top and a cold place.

The pure Alcaly of Sweat.

I once observed, as I was travelling post, this Salt, Volatile, Fat, and (therefore) penetrating and resolving Sweat; how, although my Leggs were armed with Boots made of the choicest Leather, and well waxed, so as to admit neither Rain not Water; yet the Sweat of the Horses, exhaling like a Vapour, had penetrated them, as it also happened to my Companions of good note: To avoid this inconvenience, I invented an Oyntment, like Vernish, which in other cases could resist *Aqua-fortis*, and then in a second Journey, for the first days, I found less inconvenience; but the days following, the Sweat had not only penetrated the Vernish, but had plainly dissolved it, as far as the Vapour of it reached.

Sweat salt and pingueous.

Hence I learned, That Sweat was therefore made

Salt by Nature, that it might reſolve the filth in living Bodies, which here and there was coagulated in them.

But how the Sweat of all Animals, and whatſoever doth inſenſily exhale from them, yea of which the Animal conſiſts, doth acquire Saltneſs. I ſhall explain a little more clearly, only for the ſake of this *Viperine Sult*, whoſe *Acidity*, as it is occult, ſo the Saltneſs of it is more ſubtil and grateful. I profeſs my ſelf to be the Inventor thereof, though *Momus* fret never ſo much; which the following Epiſtle ſhews: And though for Lucre of a little Gain in this Age and Theatre of the World, ſome unskilful men, and ignorant of Natures inſtruments, and of this Hippocratical Doctrine, have appeared, who obtrude, I know not what, on the unwary and unexpert, to the Prejudice of my Name, yet I now give the *Reader* to underſtand, that, which I have not diſcovered to any man living hitherto, ſave by this publique Writing.

The Invention of the Salt of Vipers.

Marcus Aurelius Severinus *wiſheth proſperity and good ſucceſs to* Otho Tachenius, *a great Studier of Nature and the Hermetical Art.*

The Epiſtle.

THe confidence which I alwayes had in your friendſhip and good will, I now really experiment: For my deſire to have ſome of your Viperine Sult, being ſcarce ſignified to you, you preſently ſatisfied me therein; for which I return you many thanks. I wiſh ſome chance would happen, that you might paſs over the Fordye Adriatique *to the flouriſhing* Parthenope, *it would be neither unuſeful nor unprofitable to you. Beſides, that choice Matron, whom you viſited in her blindneſs at* Naples, *from that very day hath impatiently longed for you; wiſhing that the hinderances of your intended Voyage were removed; but becauſe you have ſent me a Viperine gift, I will requite you with another of the ſame kind, I mean a Volume of the Nature, Poyſon, and Medicinalneſs of the Viper, printed for me at* Padua *by*

the

the Famous Printer Paul Frombottus, *who upon the ſight of this Letter, will deliver one to you in my Name; and he will give it to you the more freely, if you, ſhewing a willingneſs to communicate the uſeful obſervations, which you have long made, of this Viperine Salt, do betake your ſelf to the Famous* John Rhodius, *my ſpecial Friend, the Corrector of the Preſs; who, if need be, can add them, to the end of the Work. I wiſh alſo, you would add ſome preparation and deſcription of this Viperine Salt of your own. I have herewith inſerted the preparation of Volatile Salt, out of* Johannes Vepſerus. *Pray tell me how far you approve it, and continue to love me, as I do you: For I deſire nothing more at* Naples, *than to enjoy the hopes of ſuch a felicity as your Converſation and Company would afford. Here you would find a Liberal Harveſt; Farewel.*

Many Enemies for Truths ſake are a great honour amongſt underſtanding Men. An Old Proverb.

From *Naples* the Ides of *May*, Anno Dom. 1650.

The Illuſtrious Matron, the Wife of Capicius Regens, *to whom you gave your Viperine Remedy, Salutes you.*

But to what end ſhould I produce the Teſtimonies of Learned Men, this preſent Writing ſufficiently declares, that this Salt, with all its requiſites, was not ſo much as dream'd of by this Reformer, before I acquainted him with it; as I could ſhew by his own Letters to me, but that I am willing to conſult his Credit: yet unleſs he produce other Foundations of Art and Nature, than he hath hitherto done, he will never come to the knowledg of this Salt: No more will men of a far higher Order and Rank than himſelf, however they boaſtingly and ambitiouſly word it out, and pretend to be able to attain it.

As Urine and Sweat, ſo alſo Blood, whileſt it is yet hot and reaking may be commixed with *Lye*, and *Alcaly* be ſublimated from it; but when the ſame Blood, without the *Lye*, is diſtilled out of a Retort, with the Fire of Sand, then in the *Caput Mortuum* it leaves much Salt, ſomewhat fixed:

The Alcaly of Blood Volatile and pure, precipitates a white *Mercury*.

Mote Fixed Salt of Blood, a noble Medicine, doth not precipitate *Mercury*.

fixed: The *Alcaly* precipitates *Mercury* from the often-named Solution into a white Powder, but the Salt, doth not: Hence 'tis manifeſt, that as the Lixivious and Fixed *Alcaly* drinks up the *Acid* from the Blood, ſo the Volatile *Alcaly* of the Blood catches alſo it's Proper *Acidity*, which is Volatile too, and in the Regiment of Fire, they are both fixed into a Salt, as will more clearly appear in the progreſs.

But leaſt a New Truth ſhould procure me New Envy, I think it worth my Labour, before I go on, to demonſtrate, that *Hippocrates* was not ignorant of the Foundations of this Salt: For he in his Golden Books of Diet hath theſe words, *All living creatures as well as man, are conſtituted of two things, different in Vertue, but agreeing in Uſe, Fire and Water, both of theſe together are ſufficient, both for all other things, and for themſelves, but each of them apart, is neither ſufficient for it ſelf, nor any other thing*, &c. Thus he,

Lib. 1. Princip.

My Maſter and Philoſopher, hath brought theſe two Faculties on the Stage, *Fire* and *Water*, in whoſe Bowels all * things are contained, which are neceſſary to perfect generation and tranſmutation.

* When I had recourſe to natural principles then I knew Art to be true, ſays *Avicen.* I will ſhew thoſe things which no man yet hath aſſayed to explain, *Hippoc.* ibid.

A while after he adds, that this is no culinary fire, for he ſays, men threſh, waſh, and grind Corn, *and being baked in a hot Oven, they uſe it; with a ſtrong fire it is not made up in its Body, but with a ſoft and gentle one*; what this *ſoft fire* in all things is, *will appear in the progreſs.*

CHAP. XIII.

The occult Acid is made Manifeſt.

The Fire (ſays *Hippocrates*) is not ſufficient for it ſelf; Hence the appetite of Alimental things,

IN a ſound Stomach there is lodged a Volatile and never failing *Acid*; by the help of which, Aliments, which are all full of Volatile *Alcaly*, none excepted (as I ſhall ſhew hereafter) are tranſmuted and turned into Chyle or Juice, firſt Souriſh, and afterwards by little and

little

little into Salt (*i. e.*) nature: whether the Stomach hath this *Acid* of it ſelf, or elſewhere, it is not my preſent Enquiry, though a certain Writer intimates the former: 'tis ſufficient for me plainly to demonſtrate that there is ſuch an *Acidity*, firſt by Authority, then by experience.

for they are Alcalys, as will appear in the Progreſs.

Hippocrates ſays, *In long looſneſs of the Inteſtines, if Acid belching ſupervene, which was not before, 'tis good.* The meaning is, that *Acidity* returning to the Stomach, it changes the food into Chyle, or Vital Juice, then neceſſarily Health returns. *L. 6. Apho. 1.*

Hence all ſeaſonings and ſauces for Meat, to ſharpen our appetite, are *Acid*; as Juice of Lemon, Pomgranate, Orange, Verjuice, Tartar, Unripe Grapes, and the like, all which notwithſtanding differ much among themſelves; of which, to avoid Prolixity, I will not now diſpute. See *Chap.* 10.

To recover this *Acidity*, when it is loſt in Diſeaſes, the Ancients appointed *Acid* Sirrups, of Vinegar and Sugar; of Vinegar mixed with Water, and the like, that by their means, the Weak Stomach might be refreſhed, and the Aliment, though taken in a ſmall quantity, might not immediately putrify; which yet is taken notice of by few, eſpecially of thoſe who perſuade themſelves, that *Putrefaction* and *Chylification* are the ſame things.

Acid Juices differ from one another.

There was a certain man of the new Sect, and in his own accompt, no mean Perſon, who forbad Juice of Lemmon upon pain of death, to one ſick of a Feaver, who exceedingly deſired ſharp things, as if it were too crude; but he preſcribed ſimple Syrrup of Vinegar. I could not but admire that he ſhould allow Vinegar boiled with Sugar, for an alterative, but not Juice of Lemmons, in his Meat: He Anſwered with a loud Voice, that Julip of Vinegar was made of Water and Sugar. Our *Hippocrates* ſpeaks of ſuch a Phyſician, *If he doth not know the conſtitution from the beginning, and that which predominates in the Body, he can never preſcribe that which is good for a ſick man.* Now this *Acidity*, being oppreſſed by a long Diſeaſe, returns to the Stomach, either of its own accord, or by the Skill of an ingenious Phyſician. *L. 1. de Diæt.*

But

But that we may have ſome knowledge of this *Acidity* by Experience, Let an healthy Man drink a draught of Milk faſting, and let him preſently vomit it up again, and he ſhall perceive the *Acidity* with his Tongue, and ſhall ſee the Milk vomited up, half curdled, as if Vinegar had been poured on it; (almoſt the like *Acidity*, is commonly found in Nature, by an helping hand, which in a Glaſs turns all the Aliment in four or five hours ſpace, by the help of a gentle heat, from an *Acid Salt* into a *Lacteous Chyle*: a pleaſant ſpectacle to behold, which I can ocularly demonſtrate to any who deſire to ſee it; but in this place for ſome reaſons I forbear.) By the help of this obſcure, though grateful *Acidity*, the Viperine *Alcaly* is compacted and gathered together for its proper uſes.

He which is ignorant of the principles of Nature, hath no true root whereon to ground his Curative intention. *Geber.*

But no Sapor doth curdle and coagulate Milk, but that which is *Acid*: Now it is performed three manner of ways,

1. In the Healthy Stomach of all living Animals, Milk is not ſimply coagulated by the *Acid*, but in the very coagulation, it is neceſſarily impreſſed with the the Vital Vertue of the very Animals, which though it conſiſts in the *Acid*, yet it differs from every other *Acid*, and then it is chylified and received for nouriſhment: So in a Dog, it aſſumes the Nature of the Dog, *&c.* the handling of which Hippocratical Doctrine, being not proper for this place, I do only point at it.

An admirable thing.

2. In the Stomach of Sick Animals, the Milk is indeed ſowred, but not impreſſed with a Vital Character; wherefore the *Acidity* becomes putrefactive, which nouriſheth not, but increaſeth the Diſeaſe.

Acidity is the Vital Organ, and the bond of the Rector with the body, it may ſuffice to hint this once for all.

Hence my *Hippocrates* in ſome Feavors (not in all, as ſome would have it) forbids the uſe of Milk.

C. 5. Apho. 65.

3. Milk is coagulated by manifeſt *Acids*, and by all of them, either *of the Mineral ſort* and Claſs, as are *Acid* Fountains, Vitriol in ſubſtance, Spirit of Vitriol, of Sulphur, of Salt, of Nitre; or it is coagulated *in one only part of the Animal (i. e.) the Stomach*, and in no other; which is a ſign that the perceptible *Acidity* is not admitted into the other parts: but

Divers Coagulations of Milk.

but if it creep into them by chance, it becomes the cauſe of Diſeaſes and Death; wherefore *Acidity* lodges at leaſt in all Healthy Stomachs, which, becauſe it generally coagulates Milk, it is called by *Dioſcorides*, *Coagulum*, and commonly in *Italy Conaglio*: yea the Stomach of all Birds, have the above-ſaid *Acidity* ſo ſtrong and in ſo great quantity, that unleſs they frequently eat Sand or pieces of Bricks, whereby to reſtrain the ſuper-abounding *Acidity*, the ſaid *Acid* would ſlide down from the Stomach and trouble the other Digeſtions, whence they would fall into an Atrophy and never grow fat: or elſe it is coagulated *by the Juices of Vegetables*; as of Lemmons, Oranges, Barberies, Vinegar, and what ever elſe taſtes Acid and Sharp: Milk alſo ſowres of its own accord (as do other Juices, as well of *Vegetables* as *Animals*, when they incline to putrefaction, yea nothing can putrify or be generated anew, unleſs this *Acidity* do proceed) and then it is alſo coagulated, and the Whey ſeparated, which carries off with it the occult Volatile Alcaly, by means of which it doth refrigerate, as ſhall be ſhewed in its place.

What *Coagulum* is.

Acid and Alcaly in Milk.

Both theſe faculties are latent in good and ſound Milk, and therefore they cauſe an occult Saltneſs therein; which is the reaſon, that Salt of what kind ſoever, either Natural or Artificial, never hurts Milk; yea ſublimate *Mercury* it ſelf, being a compound of the above-named Acid Minerals (*i. e.*) Vitriol, Nitre, and Salt (whoſe Acidity being ſuckt up by the Quick-ſilver, as by Alcaly, is changed into a very excellent Salt) doth Milk no hurt at all. Hence it appears, that Salt things do indeed diſſolve mucilaginous compounds, but deſtroy not harder and more compact Bodies, as will be more plainly manifeſted in the *Sequel*.

Salt things do not curdle Milk.

CHAP.

CHAP. XIV.

The Precedent Doctrine illustrated by the Resolution and Composition of the Stone.

The Analysis of the Stone.

I said in the foregoing Chapter, that the perceptable, or manifest Acidity, out of the Stomach, was the cause of Diseases; which assertion, the Composition of the Stone doth confirm, which for greater Illustration, I will now Mechanically resolve, and again compound. Take a Stone, cut out from the Bladder, or coming voluntarily from the Reins, (a drachme or two is sufficient) put it into a Glass Retort new and clean (let not the Stone be beat to Powder, but of that bigness, that it may not stick to the Neck of the Retort) put the Retort into Sand, set too a new and clean Receiver, urge it with a moderate Fire; First of all an Alcaly, like Urine, yet of no smell, will drop into the Receiver, and a little after, you shall see the more fixed part of the same Alcaly to be sublimated in the Neck of the Retort: mix both those Spirits, the Liquid and the Solid, and keep them diligently in a Glass Vessel, stopped with Wax, for if it be open, they vanish to Air, of which *Hippocrates*, *taken part it is not sufficient, either for it self, or any other.*

l. 1. de Diet.

In the Retort when it is cooled, you shall find the pieces of Stone in the same form as they were put in, yet so light and friable, that if you touch them but lightly, with your finger, they fall to powder, (as dead carkasses in *Roma Subterranea*) upon which entire pieces, if you again pour the Alcaly reserved from the stone, or else other Alcaly of Urine, presently it hardens, as it was before; which is a signe, that the Alcaly, in the aforesaid cadaver, finds an occult Acid, which may absorbe it; for unless it finds the Acid, it abides not alone in the open Aire, but according to its nature, would vanish away, *Because being severed, they*

they are sufficient neither for themselves, nor any other, as *Hippocrates* teacheth.

Hence we learn, That the Stone (for Example) is not congealed, neither in the Bladder nor in the Reins, unless by the Alcaly of Urine, or the Alcaly of the place, and the Acid unduly, unproperly, and by mistake, falling down from the Stomach, and there being degenerated, the Acid and the Alcaly, being joyned there, must needs concrete into a Masse, as I shall every where plainly shew) and they lay hold also on that which is not much different from their Nature, which, together with these two, undergo coagulation, as I have said in Calx or Lime, and daily experience also witnesseth.

Hence Red Stones are congealed by a little Blood, which falls down in the same place from the Acid, out of the eroded vein; wherefore they are more friable and brittle; but the other Stones, having mucilage joyned to them, are whiter and therefore harder. This is that, which my *Hippocrates* most skilful in *Chymistry*, doth proclaim. *These things are thus brought to pass by Divine necessity, yet they know not what they do, but every thing fulfils his destined fate:* which is, as if he had said, both these Spirits or Faculties, being joyned together, in whatsoever place, must of necessity concrete and congeale, but being severed, they effect nothing in Nature, neither can they subsist, *being neither sufficient for themselves or other things*, as my Doctor says. So that, manifest Acidity without the Stomach, in whatsoever place it be, is Morbous and Inimicous to Nature.

I know it, says the Author of the Rosary, because of necessity the work must come to such a Nature

L. 1. de Diæt.

This Doctrine of the Old man is most true, for it is daily observed in practice, that Stones do concrete all vacuities of the body, wheresoever the Acid being out of its place, by mistake meets with the Alcaly, as in the Lungs, the Liver, the *Vena porta*, the Ureters, the *Intestinum Colon*, and the Bladder of the Gaul: which is against the most Acute *Galen*, who teaches, *That the Stone is generated in the Bladder and Reins only by heat*: wherefore the Stone of all Animals

L. 1. de loc. affect.

(of which we now ſpeak) hath nothing in its Compoſition, but Acid and Alcaly, both Volatile, as alſo Blood or Mucilage; but when it is coagulated in the Bladder of the Gaul, then it lays hold of that bitterneſs which it meets there; *ſome going hither, ſome thither, and being throughly mixed amongſt themſelves, &c.*

Hipp. L. 1. de Diæt.

Hence we may learn, of what Vertue in dangerous Diſeaſes, the Water tempered with or poured upon the Stone which is found in the Gaul of an Hedghog, may be; which yet ſome ignorant Practicioners do mightily extol: 'tis a wonder they are not afraid of this Stone, as of an igneous or fiery nature, ſince it is better from the Gaul, which hitherto they have not obſerved. If the ablution of this Stone were good for any thing, ſurely one drop of the Gall of the meaneſt Fiſh, were much better then twenty Ablutions thereof.

Wherefore from the coagulation of the Stone, it now appears, how far *Lithon-Tribon*, *Cantharides*, *the Blood of an Hare*, *of a Fox*, and the like, have hitherto profited in the Stone; ſo that *Paracelſus* rightly judges, that the Stone (and the Knotty Gout) are coagulated like Tartar, by two Faculties, according to the Doctrine of *Hippocrates* (*i. e.*) the Acid and the Alcaly; it alſo coagulates with it ſome *fæces*, which by chance it finds there; and *Galen* witneſſes againſt himſelf and his followers, *The cauſe being known, 'tis eaſy to find the remedy*, and therefore whatſoever of the Stones of Crabs, of *Lapis Judaicus*, of Flints, of the Stones of Carpes, of Perches, and the like, being in Powder, or diſſolved in Vinegar, is taken at the mouth for the Stone, it indeed imbibes the Antecedent cauſe of the *Coagulum* (*i. e.*) the Acid as I have ſhewed; but it doth not abate or diminiſh the Stone, when it is once coagulated. So alſo Salt things, by reaſon of their Acid part, do hinder the concreteing of the Stone, in as much as they conſume and drink up the Alcaly of the Urine, ſo that the Acid roving up and down the Body can find no Alcaly wherewith to aſſociate or be coagulated; but Salt

Lib. 7. de Meth.

things

things do not diſſolve the Stone, when it is already concreted.

But that common Salt doth imbibe and abſorbe into it ſelf the Alcaly of Urine, and other Alcalyes of Animals, as I have ſhewen above in the preparation of Sal-Armoniack, ſo I will now further demonſtrate by another experiment.

'Tis known, That the fleſh, of whatſoever Animal, is preſerved by common Salt, which in a few days runs down there-from into a Salt Sanguineous Liquor: Boil about a pound of this Liquor, and ſcum it, and put it into a Glaſs Retort, and with a gentle fire, draw forth all the moiſture; laſtly, cover the Retort with ſand, increaſing the fire, then the Alcaly of the fleſh will be elevated into the neck of the Retort (like the Alcaly of Urine;) which the common Salt had abſorbed and drawn out from the fleſh; only by a few days maceration and ſteeping; after the ſame manner, the Salt which we eat, muſt needs conſume and drink up the ſuperfluous Alcaly (gathered together here and there in the Cavities or Ventricles (as *Hippocrates* ſays) which is unfit for Tranſpiration; reaſon it ſelf dictates this, and experience beareth witneſs thereto; for Alcaly by an eaſy proceſs is ſublimated out of Urine, and the Sea-ſalt remains, as it was eaten, in the bottom, the ſame way as I juſt now ſhewed, concerning the Salt Liquor of Fleſh. The Dignity of Common Salt.

Hence we may gather, That Salt is beſtowed on Mortals, as a neceſſary ſupport of Health and Life.

'Tis plain from our antecedent Diſcourſe, that by a Mechanical neceſſity, the Stone is not diſſolved, unleſs by a middle Sapor between Acid and Alcaly; This Sapor is changed into Urine, of great Strength, and grateful to the inteſtines (as hath been ſaid) and it ought to be ſubtil, that it may paſs up and down and pervade all freely. If you will call this way of diſſolving, either by its contrary, or by its like, you do not much miſtake, for the Alcaly if it diſſolves, 'tis done by its like; the Acid, if it deſtroys, 'tis done by its contrary: Who (of what Sect ſoever) beſides *Hippocrates*, could have unfolded this Riddle to us, wherefore *Galen* com- The Wiſe ſay, nothing is more natural, than a thing to be diſſolved by that, of which it is compounded. *Hipp. de Vet. in Homine.*

commends Him, not without Cauſe, as * our Director in Phyſick, and an excellent Maſter in the whole courſe of our Life.

* Ad Glauc.

There is alſo a Specifick Remedy, known to few, which in young people fully and perfectly takes away the Stone of the Blader, without relapſe, and elder perſons may alſo take it at Mouth, without any inconvenience. I would willingly communicate it, if I were not afraid of Impoſtors; but chance here more prevails then reaſon: The *Aſthma* and *Epilepſie*, are alſo perfectly cured by the ſame Remedy.

A Remedy for the Stone, Aſthma, Epilepſy.

CHAP. XV.

A Thing unheard of, and admirable, yet moſt ancient, diſcourſed of.

I Have already declared, That the Acidity in the Stomach, I have alſo ſhewed, That the Stone, Urine, Swear, and Blood, are Salt. I have alſo ſhewed, how the Salt or Sapor taſte is divided with fixed Alcaly, that ſo the Alcaly may be freed from the Acid; now it is my part, to ſhew, how, Urine, Sweat, and Blood, *&c.* do acquire this Salt Taſte? All Aliments, and whatſoever doth nouriſh, have but a little of the Acid, and much of Volatile Alcaly (as hereafter will be more clearly ſhewed) (*i. e.*) as much Acid as will bind up and reſtrain the Alcaly, that it vaniſh not away (*for alone it is not ſufficient for it ſelf*) as I have formerly noted out (of *Hippocrates*) the Acidity of the Stomach acts upon that Alcaly; of theſe two Sapors is made a Salt-Juice, which being impreſſed with that Acid Vital Character, is called Chyle: This paſſeth not through the Meſaraicks, neither is it admitted thereunto, unleſs it put on (after its own manner) a Salt Taſte (*i. e.*) a mature one; otherwiſe it will be ungrateful and troubleſome to the inward parts; and ſo the Acidity of the ſtomach, viviſies the Chyle, that it may be made fit for nouriſhment.

L. 1. de Diæt.

Hence

Hence it is, that my * *Hippocrates* saith; *As the Stomach nourisheth, heateth, and cooleth in Animals; so doth the Earth in Vegetables*, which sounds thus; That the Stomach is the President of all Actions which happen in the Body, for the sake or by means of Vital Acid alone lurking there. I think there is no need, that the Urine of great Drinkers and Toss-pots (who by reason of the quantity, they swallow, do piss every hour, especially, if it be Watery Rhenish Wine, which they drunk.) should pass through all the Channels and Ducts of the Veins, for then it would come forth tinged; but their Urine, though like in colour to simple Water, is notwithstanding Salt, like That which is produced from moderate drinking; which the Alcalizate Lye proveth, as I have shewed concerning Sweat: On the other side, the Urine of dying men, though they make it, in a little quantity, and tinged to, yet it altogether wants Saltness, and also Alcaly, (besides the common, if they take any in their Meat:) wherefore of necessity that Saltness must be generated from the Impression of the Vital Acidity, having it's place in the Stomach; which forsakes dying men by degrees.

* *De humoribus*

Urine of sound men, Salt.

Urine of dying men Saltless.

By this observation, 'tis as clear as noon-day, that the Vital Instrument, in sound animals, (wherewith the Aliment is impressed, before it glides from the *Pylorus*, lest it should putrify, as I have said out of *Hippocrates*) is Acid, wherewith the Chyle, in the very Stomach (representing an Egg, or grain of Seed,) must be made Salt. In one word, Chyle is made Salt, by and with the Acidity of the Stomach, and the Alcalizated Aliment; So is also the Urine Salt for the same Cause (even of those who never tasted any Salt) their flesh and bones, yea the very excrements of the Belly are Salt; yet the Alcaly hereof, though it be an hundred times Rectified, in a few hours, is again changed into That, which it was, by means of the Ferment of the Place, or of this hidden Acidity, lurking and abiding there, whence We learn, that the Alcaly of every thing, doth contain and keep and preserve the occult Acid (imperceptible to sense) of the Animal, or else of that part, whence it was taken; for which Cause *Paracelsus*, being illuminated in the Ancient

The Proto-Chymick dwells in the Stomach.

This Experiment shews whither a Glister can nourish.

The difference of the Alcaly of Animals cannot be distinguished by our senses.

I

A cient Hippocratical Science, and after him, the famous *Helmont*, have ſpecificated a Liquor for the Stone; *Ludus* (by reaſon of the Symbol, or the Ferment of the place, which it may be lawful for me, to intimate;) (So the Viperine Alcaly, having an Alexipharmacal property (after its manner) is reſtrained from flight by the above-named and declared Acid, and it is celebrated in very many Diſeaſes, eſpecially in the Feet-Gout, Jovnt-Gout, and its ſpecies, (whoſe pain, as *Pareus* firſt hath obſerved, with unſpeakable benefit and advantage) is not without occult Poyſon) to which, in an exigent, I add a little powder of *Sena*, of *Hermodactiles*, and of *Cremor Tartar*, *ana* a *Scruple*;) but it goes through all the paſſages of Man's body, in an occult Saline form, like Sweat; but when it finds a more Acid Sapor in the Cavities, Articles, and Joynts, then it relinquiſheth its proper Acid, and imbibes that more potent, dolorous, and burning One: after the ſame manner, as it happeneth in Corals diſſolved in Vinegar; on which, if a more Acid liquor be inſtilled, as of Vitriol, or Sulphur: This aſſociates it ſelf to the Corals, and neglects the Vinegar, as is well known to every puny *Apothecary* (ſee alſo the neceſſity of Precipitation, *Chap.* 28.) But when the Acid is not alcalized into Salt before, it paſſes through the Meſeraicks, and by chance is received and entertained within, creeping even to the Blood, it waxes ſoure, and preſently there follow Feavors and Pleuriſies; for the Blood, ſent forth at that time, concretes into clotts, becauſe the abounding Acid, drives the Alcaly together, as I have ſhewed in Milk. In this caſe our Anceſtors have found out Specifick Remedies for the Pleuriſy, friendly to the Stomach (where they reſiſt not nor hinder Digeſtion) which abound with Volatile Alcaly, that they may reſtrain and conſume the Acid, ſuch as are, Goats-blood, Juice of Wild-Succory, the Peezil of a Stagg, or Bull, the Seeds of *Carduus*, and the like, which are preſcribed at this very day with good ſucceſs, eſpecially after Letting-blood, the blood being now ſoured in the Veins; for then the aforeſaid Remedies do eaſily abſorb That which remains, after the ſame manner as

I

* *Ludus* is the Stone cut out of Mans Bladder.

L. 7. c. 2.

Pain of the Gout from *Acidity*.

Different Cooks ſeldom prepare wholſom Meats.

Remedies of the Pleuriſy.

I have ſhewed concerning Crude Vitriol precipitated with Liquor of *Tartar*, for one only drop of either Sapor exceeding the other, turns the whole mixture either into Alcaly or Acid; ſo one drop of the Acid, if it enters into the blood, cauſes a Diſeaſe. Hence it appears that Health conſiſts in a very narrow point, which is a temperament, *ad juſtitiam*, or *ad pondus*, as *Galen* ſpeaks, *Which we rather ſuppoſe and imagine, then that it really is.* Hence * alſo that of *Hippocrates*, *Bodies advanced to their full vigor, ſtay not there, but as weighed in an equal ballance, turn down to the contrary ſide.*

L. 11. de Temperam.

*L. 1. Aph. 3.

By what hath been ſaid, the reaſon is manifeſt, why Vitriol exſiccated, performs vital actions, with blood, ſweat, urine, or execrements, as it may be drawn to ſome certain Object, of which I forbear on purpoſe to ſpeak in this place, leaſt I ſhould exceed the bounds of a Compendium.

Wherefore the Vital Inſtrument, or Seminal Vertue, (call it as you pleaſe) in all things, is Acidity, either hidden, or manifeſt. This Vertue reſides *manifeſtly* in the Stomach, but in the other members *obſcurely*, as * *Hippocrates* witneſſeth. *Man*, ſays He, *hath more than one Ventricle, all the Muſcles have their Ventricle.* Now it is the office of the Stomach to change one thing into another, by the help of the two faculties (*i.e.*) the innate Acid, and the acquired Alcaly, for ſo we are to underſtand this, as my *Hippocrates* enjoynes, ſaying, *Men cut wood with a Saw, one draws to, another thruſts from, ſo alſo is the nature of Man.* So that the aforeſaid Acid (which I have ſhewed to be occult in Milk) aſſumes the Alcaly in the Aliments, and whatſoever is not repugnant to its own nature, it coagulates it with it ſelf, and increaſeth into a bulk which is vulgarly called *Nutrition*, but by my Maſter, *Natural Labour*, ſaying, *Man cannot be healthy, unleſs he Labour, but it is meet and fit that a Phyſician throughly know the force of Labours, both of the Natural and alſo of thoſe which are done by force, and which from them prepare Fleſh for augmentation and growth*, as upon the Authority of *Hippocrates* I have given [illegible] Examples in Lime and Sope; but theſe

* *L. d. Arte.*

L. 1 de Diæt.

* In the beginning of the forecited Book

things being obſcure, by reaſon of their brevity, in the following Chapters, I ſhall more largly explain, diſcovering every thing particularly, which here are but generally propounded, *That you may know Nature to be alike in every thing*, as the Venerable * *Pythagoras*, with my *Hippocrates*, doth teach.

* *In aureo carmine.*

Since therefore, whatſoever is put into the Stomach, ought to be changed into a Salt Volatile, and the Chyle is not proportionated, but by reaſon of ſome Error, from within or without, hath more or leſs of Acidity, as we ſee in Drunkards, who ſometimes vomit up what they drink in, of an Acid taſte; then, * the importune Acidity, creeping through the Meſeraicks, becomes unfit (according to *Hippocrates*) for Aliment, and for the Subſequent Ventricles, and then, the whole Body falls into an unequal heat, and becauſe the Aliment is diſproportioned, it muſt of neceſſity be unfit for Exhalation, as *Hippocrates* again teaches in the fore-cited Book, *Of neceſſity*, ſays he, *thoſe things which are ſevered and produced from it, muſt be unlike*, &c.

* If it be forced violently, and overmuch, it loſes its ſucceſs.

Hipp. l. 1. de Diæt.

Whence we ſay, that the Pores are obſtructed, and tranſpiration hindered; and then a Feavor, or other Diſeaſe, muſt neceſſarily follow. Hence every Diſeaſe, according to *Hippocrates*, doth generally conſiſt, either in matter coagulated, or in matter more or leſs diſſolved; and it differs according to the quality of the taſte or ſapor, of which he reckons an infinite number, *in his Book of Old Medicines, and in his Aphoriſms, Sowre Belchings, which were not before, comming on ſowre and ſtinking ones, is a good ſign*; he means not in every looſe Diſeaſe; for Example, In the Flux of the Belly, Acidity is deficient in the Stomach, and in thoſe Perſons where it is, there happens a Flux, or looſneſs of the Inteſtines from too much Salt Sapor, which Sapor doth at leaſt diſſolve thoſe things, which are but lightly and gently concreted; yet it is never pernicious, but is overcome by Milk alone, becauſe Milk is eaſily mixed and waſhed off with Salt things: But if the Acid and Alcaly are proportioned with a due heat, in every Ventricle, *like adhearing to like, without*

L. 6. Apho. 1.

out any strife or variance. This is called *Sanity*; and so *Smegma* Sope is perfected and coagulated; which also it self, if it be disproportioned, becomes Morbous; and must be dissolved by its like, and again, by its contrary (as I have shewed above) it must be reduced and recocted for Sanity, and be coagulated into Salt. *Hipp. 1. de Diet.*

'Tis enough to have hinted at these things belonging to this matter, concerning the rise and generation of Volatil Salts in the Animal Family, unless any man shall object, that Volatile Salts are therefore made because we eat Salt things; which I have shewed before to be impossible, by reason of the fixedness of Salt; yea Salt is found in Urine, as it was eaten, being unchanged in its Form and Nature, and without the least Alteration, as may be easily experimented (*i. e.*) *viz.* by the insolation of Urine, and afterwards by its Calcination, Solution, and Coagulation, where Salt is found granulated; as also, Men live on the *Alps* of simple Milk alone, whose Urine notwithstanding, is not destitute of Acid and Alcaly, which though concreted in the form of Salt, yet it is not granulated as Sea-salt, but of a Cubical form; nor doth it endure constant in the Fire, but the Alcaly, with a gentle heat, forsakes the Acid, as Experience doth declare.

CHAP. XVI.

A return from the former Digression, to the Mechanical Demonstration of Alcalyes.

I have shewed the way of Extracting Alcaly out of Sweat, so also out of Urine, out of Blood, out of the Flesh of all Animals; I have also declared that Alcaly, with the Acid is changed into Salt, not only in the Stomach, but in all the Ventricles, of which * *Hippocrates* reckons an infinite num- *L. de Arte*

ber; and when that Salt hath done its work, then together *with its diſſident or contrary (i. e.)* with the unctuous excrements, it tranſpires; and is carried off into Elements, as it happens in all ſublunary things, and I have ſhewed in Fixed Salt of Tartar and Oil (and ſhall afterwards do it more plainly) and alſo in Artificial Sope, which after it is made, and hath ſerved for uſe, will return into Water and Earth; which tranſpiration and reduction to Earth, *ad orcum*, will more manifeſtly appear by Examples.

L. 1. de Diet.

Vitriol ſeperates *Alcaly* from *Acid.*

Let any one drink, or but lightly taſte, a little Vitriol of *Mars*, and preſently his Tongue waxeth Black, ſeeming to ſwell, as if it were furred with Velvet, whoſe Pores, are always turged with the Exhalations Occultly Salt, which either are mingled with Spittle, or vaniſh into Air; ſo that as ſoon as ever the Acidity of the Vitriol of *Mars* perceives the hidden Alcaly in the Spittle, in a trice, it ſeparates the *Colcothar*, which ſticks to the Tongue and makes it Black. But leaſt you ſhould think I ſpeak of incredible things, behold an Ocular Demonſtration.

Diſſolve *Vitriolum Martis* in fair Water, into the clear Solution, inſtill by drops the fixed Alcaly of Tartar, *(i. e.)* the Liquor of Tartar, then the *Colcothar* falls obſcurely greeniſh.

Alcaly	*Celandine* *Lavender* *Wormwood* *Roſemary* *Volatile urine* *Sweat* *Blood* *Vipers.*	*Præcipitates diſſolved Vitriolum Martis of a*	*Yellow* *Green* *Orange* *more dark then Salt of Tartar* *Darkly green* *Brighter* *Obſcurer*
			Colour.

Salt of Bean-ſtalks, troubles it into a Yellowneſs, and after an hours reſt, elevates Ocre from the bottom: Common Salt, as being the perfecteſt of all Salts, is mixed with Vitriol; So alſo *Mercury ſublimate*, being an arti-

artificial Salt, and alſo all Acid things, do not precipitate Vitriol.

Wherefore only Alcalyes do precipitate Vitriol, enclining to black at bottom, but they are not found fixed in a living Animal; but are only Volatile, and being perpetually compact with the Acid, after they have ſerved for uſe, do exhale from us, and tranſpire with the Acid under an Occult-Salt-Sapor, which will more clearly appear.

The whole body of Man, as long as he lives, is Expirable and Conſpirable, as *Hippocrates* firſt obſerved, and whatſoever expires, is occultly Salt; but this Salt evaporates not only to the External Surface of the body, but the greateſt part of it falls down to the inteſtines; which is thus proved.

Drink Vitriol of *Mars*, diſſolved in water, and you ſhall ſee the excrements of the Belly tinged either black or green, after the ſame manner, being precipitated by the inward Alcaly; as I have already declared by experiment: but in the External habit of the body, diſſolved Vitriol is not precipitated by the Effluviums of Salt, therefore it paſſes in greater quantity, to the Inteſtines; So neither is the Urine tinged black, for the *Colcothar* is precipitated before the liquor is hurried to the *Meſaraicks*; ſo that of neceſſity it muſt remain in the Bowels.

If therefore the greateſt part of the Excrements paſs to the Bowels, being deſigned by Nature for Expulſion, It is ſometimes by miſtake detained in undue places by the Bonds of Coagulation, or to ſpeak according to *Fernelius* Language in the Firſt Region of the Body, and then of neceſſity it muſt be furthered in order to Expulſion, by ſome Looſning Medicament; So that it ſeems not to me, that all Looſning Medicaments are to be diſallowed in Diſeaſes, as ſome think, *neither are they alone ſufficient to procure health and recovery*, as the greateſt part of Phyſicians do believe and practice, againſt the Tenent of *Hippocrates*.

Purgatives alone are not ſufficient to recover health, as *Hippocrates* teaches.

But it may be demanded why Acid Fountains carrying Iron, make not the Tongue Black, as well

as the Excrements of the Belly? That happeneth, becauſe the Natural Acid Spirit corroding the Vein of Immature Iron, being mixed with Water, is not ſaturated, but prevailes in the *Compoſitum*; and the Fountain being drunk off in the very Act of Corroſion, there is not then time given for Præcipitation in the Tongue; but as ſoon as the grateful Acidity is carried to the Stomach, then the *Colcotar* falls, or is præcipitated from the Alcaly, which flowes to the diſſolved Iron, for defect of one faculty and exceſs of another, and whatſoever of Mucilage they catch in that Coagulation, they conſtrain into their own Nature; as I have above-ſhewed in the Concretion of the Stone, by the Authority of *Hippocrates*, and in a rude Example in ſlacked and diſſolved Lime. This *Coagulum* is called by Phyſicians *Obſtruction*. The Acid or the Alcaly may now and then exceed in it; ſo the Stomach repugne not, which is the preſident of all Actions, as **Hippocrates* teaches; or if the Acid Waters touch the place (which paſs not beyond the *Diaphragma*, a thing to be noted) they without doubt deſtroy it: I ſaid that Acid waters are to be drunk in the very Action of Corroſion; (*i. e.*) they are to be taken from the living Fountain, for if they flow down a little from it, then the Action ceaſeth, and the Acid Spirit being ſpent and conſumed by the unripe Iron, grows faint, and with the Solution is præcipitated into Ocre, which affords not a Black (for it is not præcipitated with Alcaly) but a yellowiſh bottom, as it happens to all Vitriol, paſſing through and carrying Iron. A Phyſician of the Canonical Sect, having learned well to quarrel out of *Ariſtotle*, a few years ſince, cauſed Water out of a Fountain, corroding a Vein of Iron, to be brought from the Country about *Trent*, to a Noble Senator of this City, being *Hypochondriacal*, who fearing leſt the Corroding Spirit would exhale, commanded the Water to be filled in Glaſs-jars of a long Neck, and Oil to be poured a-top, and ſo to ſtop their Mouths with Wax, and to bind them with a Bladder, rejoycing by this ſubtle Device, as it were, to have impriſoned

Obſtruction what.

* *Lib. de Humor.*

soned the Spirit of the Fountain, which he looked upon as *Spirit of Wine*: yet notwithstanding to such men as these, though they are ignorant of the Instruments of *Medicine*, God so permitting, we entrust and commit our Lives, Fortunes, Wives, Children and Families.

Hence the bold, though ingenious, * *Helmont* crys out, *That a Physician is now adays a rare thing in* Europe. This man if he had been truly versed in *Hippocrates* his School, and had read over the Book of Nature, he had never so shamefully discovered himself, *neither would Physick, the Noblest of all Sciences, be accounted the meanest*: I say he might have known, that the Acidity doth not exhale, but only by its Action on the Iron, grows weak, and then exhales not, but both of them go to bottom in the form of Faeces, which is called Ocre; neither can I sufficiently admire the vanity of some pratling Boasters, who with the same stupidity, hold forth the distilling of a Fountain, and divineing by the bottom, so Rich men are sent away empty, and without advantage or benefit.

* *Tract. Catar. Delirum.*

* *Hipp. de Lege.*

Claud. de ingressu ad infirm. c. 1.

The *Spaw* Water is much more Acid, and though it corrode a Vein of Iron, yet it retains a certain Acidity, and therefore it permits it self, and is capable to be carried to another place.

The Renowned Fame of this Fountain, about ten years ago, moved a Noble Vicentine, curiously to enquire into the Nature of this Fountain, for his own healths sake; to whom I briefly described its properties, and for what Diseases it was good, being at that time with the Most Illustrious *George William*, Duke of *Brunswick* and *Lunenburge*; though afterwards I went into *Low Germany*. The Noble Man being returned home, by chance related to a Physician of that City, what I had said concerning the Fountain, whereupon he wrote a long Letter, under pretence of Advice, to the Famous and Excellent *Theodore Konerdaig*, the Dukes Learned and Chief Physician, which he sent unsealed to the Dukes own Hands, and in the Margent my Name was Inserted, that it might easily be read by him

him viewing the Letter; the Duke reading it, and disdaining so mean a Fellow, asked me, whether I knew who wrote it? I denying it; 'Tis well, says he, that thou art Despised and Reproached by the Vulgar, read it and hand it to Mr. *Konerdaige*, that he also may know who Wrote it.

Falsity hath little strength.

The Incomparable Prince gave no ear to Backbiters, but carryed himself, as if he had never read their Reproaches. The whole Contents was nothing but Calumny and Railing; wherein he accused me, for bringing in a new Philosophy; which Reproaches, savouring of nothing but a malignant mind, and stupid ignorance, let them go as they came.

'Tis the part of a Wise man to undervalue the Calumnies of the Unskilful.

But to the Matter, As Vitriol, and all Waters, containing dissolved Iron, are præcipitated into a black bottom, so also, the Acid Spirit of Vitriol it self, although it be rectified, retains the *Liquamen* of the Metal, on which, if the purest Alcaly be poured, it is præcipitated indeed, but not into a Black, but into Colcotar, constant in the Fire; wherefore they that use this Powder for Whitening the Teeth, are much mistaken: 'tis true, it strengthens the Gums, but it dies the Teeth, with a most tenacious Yellowness, as Vitriol it self makes them Black; for perpetually and necessarily something of moisture doth exhale from us, filled with Alcaly, which also about the Cavities or Alveoli of the Teeth, precipitates Colcothar out of the aforesaid Spirit, which sticks to the Teeth, and makes them Yellow.

Spirit of *Vitriol* Dyes the Teeth yellow.

CHAP. XVII.

Upon Occasion of Vitriol, the Salts of Vegetables *are more exactly and throughly considered.*

I Have formerly told you, That neither Acid nor Salt, nor any other Sapor, doth overcome and destroy Vitriol, but Alcalyes alone, but the Juice of

of unripe Galls, falls in with Vitriol, and makes a coalition therewith into black, deſtroying and abſorbing the Acidity thereof; and therefore this Juice is to be reckoned amongſt Alcalyes; after this manner, Ink, and all Black Tinctures are made: yea, when the Acidity of the Vitriol is not, to ſufficiency, combibed by the Alcaly of Galls; which comes to paſs, when the Galls are too ripe, and are waſhed by the Rain; then the Alcaly doth expire, as it happens to all Vegetables, of which hereafter in its place; then the Vitriol erodes and eats out the Cloth, and it becomes as rotten; whence the Vulgar ſay, * *La robba e bruſada, nella tinta.* So alſo, Letters written with Ink, boiled with the aforeſaid Galls, do wax pale, becauſe the prevalent Acidity of the Vitriol, conſumes the weak Alcaly of the Galls, being waſhed with the Rain, after the ſame manner as any Acid Spirit ſpread upon a Writing, preſently deſtroys the Black Colour (*i. e.*) the Alcaly, which another fixed Alcaly doth again recover and reduce. So if you write with Water, wherein Vitriol of Iron hath been diſſolved, when it is dry, no ſign of any Writing will appear, but if you ſmear over the Writing with a ſimple infuſion of Galls, in a moment the Alcaly of the Galls makes the Writing Black, which by a powerful *Acid* or *Aqua fortis*, is preſently blotted out, *viz.* The Alcalyes being conſumed by the *Acid*. Again, ſmear over the Paper with fixed Alcaly, this will again conſume the *Acid*, and the *Writing* will re-appear. By what hath been ſaid, it appears, that Vitriol doth not dye Black, unleſs its Acidity hath been abſumed by ſome Alcaly or other.

Things much different do moſt of all accord. *Hip. L.* 1. *de Diæt.*

* The Stuff is ſpoiled in the dying.

The Ground of *Cryptography.*

But that the Alcaly of Galls may be made more perfect, anoint them over, at leaſt with ſome Fat, or with ſome Oil, the hidden Acidity of which enters into the Galls, being placed in a pot, in a ſlow Fire of Aſhes, leave them there till you ſee the Galls become Blacker, but not ſo as to be reduced to Coals; then their Alcaly will be more fit for Colouring; and an Ounce of ſuch burnt Galls, doth more than a

Alcaly of Galls.

pound of others; yea it colours of it ſelf, becauſe the Acidity of the Fat, by the Fire, hath acted upon its Alcaly.

Rinds of Pomgranates.

Very many Vegetables do abound with the like Volatile and Occult Alcaly, as the greater Houſleek, Sage, Rinds of Pomgranates; all which do ſpend and abſume the Acid of the Vitriol, and cauſe the Colcotar to be much leſs black.

A certain Prince of great Renown, an Enquirer into the Myſteries of Nature, wondered much, when he heard that a certain Gentlewoman of the Nurſery in his Court, had taken by Mouth, Rinds of Pomgranates (which are univerſally judged to be Adſtringent) which yet provoked the Courſes in her, which had been ſtopped ſome Months: To whom, when I declared the copious Alcaly, wherewith theſe Rinds do abound, and that the ſtopping of the *Menſtrua* did ariſe from that Morbous Acidity, which the Alcaly of the Rinds had abſorbed, it ceaſed his wonderment.

Things thoroughly mixed and divided are altered. *Hip. l. 1. de Diet.*

But you muſt note, that Artificial Vitriol of an Azure colour, (which is falſly called (*Cyprus Vitriol*) doth not become black, with Galls, though they be burnt, but with Rinds of Pomgranates it tinges obſcurely Yellow: Now it is made of the ſpangles or thin flakes of Copper, by Spirit of Sulphur, or of common Vitriol; both which in a cold place, are Coagulated into ſomewhat long-angular little ſtones, hardly diſſolvable, and unfit for Diſtillation, becauſe it wholly wants that *Cupreous Sulphur*. This, with Urine, waxeth Green, and with the Alcaly of Urine; is caſt into an Azure bottom, which by Fuſion returns to Copper.

So alſo *Verdigreaſe* (as proceeding from ripe Copper and Vinegar) doth not wax black with Galls, but becomes of a light red or Spadiceous colour, and, by the Reformers leave, I know, and have experimented, that nothing but Vinegar will be diſtilled from thence, becauſe the remaining *Caput Mortuum*, after Diſtillation, by the fire of Fuſion, is reduced to pure Copper, of which more hereafter.

Diſtilled Æruginis yields Vinegar.

Whence it appears, that burnt Braſs, with toſted Galls, pro-

produceth not a black tincture, as *Alexius* of *Piedmont* promiſes, with which proceſs the Women of this Country do wonderfully vexe themſelves, that therewith they may black their hair; for as far as this compoſition tingeth any thing, it owes that Vertue to the toſted Galls; the burnt Braſs contributing nothing thereunto. *Alexius* his Secret.

But Cyprus Vitriol, is truly *Hermaphroditical*, richly furniſhed with natural Acidity, and *Cupreous* Sulphur; for which reaſon it is always moiſt, and never of it ſelf concretes into ſmall ſtones, wherefore it very eaſily grows black with Galls; which is a ſign, that it partakes of the Nature of *Venus* and *Mars* (for Vitriol of *Venus*, without *Mars*, doth not grow black with Galls, as I have ſhewed.) The Metaphor of *Mars* companying with *Venus*, doth not unfitly ſuit here.

For Iron and Copper, are of affinity one to another, as Male and Female. This Secret (ſayes Baſilius*) you may take notice of, but conceal, for it is of great uſe.* This Vitriol, diſſolved in water, is of a Tawney colour, if burnt Braſs be diſſolved in it, or flakes of Copper, or Iron, then it concretes into little ſtones, and becomes vendible, but inferior to that which is Medicineable. *De Vitriolo.*

The White Vitriol which comes from *Goſloria* and that alſo from *Carinthia*, doth participate indeed of *Mars* and *Venus*, but are not rich in natural Acidity, for which reaſon they very ſlowly wax black with Galls, a drop of this Solution, mixed with Galls, and falling on Paper makes a Party-coloured Iris, after it is dry. White Vitriol.

But *Romane* Vitriol, which abounds with Iron, though poor in Spirit, yet it colours quickly, becauſe of the Iron; So Artificial Vitriol, which is made of the fileings of Iron, with Spirit of *Vitriol* or Sulphur, doth tinge moſt readily; and therefore *Dyers*, for want of Sweet *Vitriol*, do add fileings of Iron to the Humid, and by conſequent the ſharp which it doth Corrode, and ſo the *Vitriol* is Dulcified. *Roman* Vitriol. *Vitriolum Martis artificiale.*

So alſo *Crocus Martis* (which is made of artificial *Vitriol*, burnt in a covered Crucible, till it be red) being diſſolved with Spirit of Salt: and digeſted with Spirit of Wine, acquires a golden colour; and becomes a noble Medicine. One drop alone of this Solution in half an ounce of the Decoction or Extract of Galls, becomes perfectly black; *Crocus, Martis, Solutus.*

pour out this black, and wash the vessel with clean water, and the Ablution will be of the colour of an *Amethyst*; A drop of the former, on Paper, after it is dryed, of its own accord represents divers colours, as a *Peacocks* tail, curious to the eyes of the beholders.

Whilest I was busied heretofore about these curious experiments, I perceived my fingers to be tinged with a Purple colour, as it happens from Gold dissolved in *Aqua Regia*: and the tincture endured for some days; This *Basilius* calls *Sanguis Veneris & Martis*, *The blood of Venus and Mars*, and commands us, not without reason, to observe it accurately, and to conceal it.

Gold. Gold corroded by *Aqua Regia*, and coagulated into the shape of *Vitriol*, doth tinge the fingers, as I have said, of a Purple colour; and with the infusion of Galls, the liquor becomes like yellow Amber, with which, if with a liberal hand you dawb over Paper, after it is dryed, it shines as Varnish.

Silver. Silver corroded in *Aqua Fortis*, of *Nitre*, and *Alome*, with an infusion of Galls, doth not change its nature; if you write on Paper with this mixture, after two days every black letter, is, as it were compassed with a Silver and shining list, which cannot be without Alcaly: Hence this rare Man may understand why the Ancients Metaphorically called Gold the *Male*, and Silver the *Femals*: A drop of this Solution, if with a large hand it drop on Paper, after the silver list it draws and makes another of a Chesnut colour, a pleasant Spectacle, as if it were so painted on purpose: So also, *Tinn*, and *Lead*, being reduced into *Salt* or *Vitriol*, with the juice of Galls, as also with Alcaly of any sort, yields a white bottom (*i. e.*) the Alcaly of the Galls drinks up the Acid, and the Metal goes to bottom; but not so in Gold, nor Silver, nor Copper, *&c.*

Lead, Tinn.

Mercury. *Quick-silver* dissolved by Acid things, and re-coagulated with the aforesaid juice of Galls, waxeth but slowly Yellow, imitating Gold; which is to be observed.

Wherefore of the seven Metals, being dissolved by Acids, Iron and Silver, with Galls, do tinge of a black colour: Yea, Silver doth the same without Galls, and the blackness

neſs appears after the Acid Spirits are ſpent. Other Metals, though diſſolved and re-coagulated, do ſhew as if they were *Vitriol*, but perform not the actions of *Vitriol*.

Find out the cauſe, if you can, for it is not unpleaſant to diſcover it.

A Semi-acid-Salt Spirit, Diſtilled from the *Caput Mortuum* of Tartar and *Sal Armoniack*, was mixed with *Bole Armonick*, of which above. This Spirit, with juice of Galls was greeniſh in a moment; From which I learned, that the *Bole Armonick* did neceſſarily contain in it immature Copper-ſeed, which the foreſaid Spirit catcht away with it in the torture of the Fire; I call it a Copper-ſeed, for *Vitriol* made of Copper, with Spirit of *Vitriol*, being precipitated with juice of Galls, appears of the ſame green colour, as I ſhewed above: but when it is made of common *Bole-Armonick*, then it is black. An admirable Spirit.

Whence it is clear, that the Volatile Salt, or the Alcaly of Galls, or of Pomgranate Rinds, or of Vulnerary Herbs, do not dye of a black colour, unleſs with Iron, diſſolved in an Acid Mineral. Foundation of black colour.

There is another obſervable thing, that a pure Acid natural Spirit, cannot be extracted or acquired by any man; for being Diſtilled from *Vitriol*, however rectified, it never forſakes the *Liquamen* of the Metal; neither can it be precipitated from it, by any Alcaly, after the common way; for in theſe it cloaths it ſelf again with a new body, and returns to what it was, as I have ſhewed in its place, yet *Paracelſus* doth praiſe that Acid Spirit, which is found near the Village *Veltin* in *Helvetia*, as in ſome ſort pure, as I have elſewhere obſerved.

Add hereto, the Counterfeit, which the Reformer boaſts for *Magiſtery of the Seed of Kermes*, which yet is nothing elſe, but the Alcaly of Allum; which ſucked up the Occult Acidity, from the very grains, for fear of a *Vacuum*, inaſmuch as it loſt its own proper Acidity in the Alcaly of Tartar. *Pharm. Regia, fol* 282.

CHAP.

CHAP. XVIII.

Pass we now out of the Mines (Under-ground) into a pleasant Garden, to the more hidden Volatile Alcalyes of Vegetables.

Mechanical Instruments of Vegetables are the two faculties of *Hippoc. L. 1. de Diæt.*

ALl Vegetables, as well as Animals, have Vital Instruments, which they make use of, for their encrease and propagation. The prevailing *Acidity* therefore lies sleeping in the Seed (as in an Egg, or in a Stomach) with a little Alcaly, for its sustentation, and with the specifick *Rector* (of which elsewhere) but when it is cast into the earth, it is dissolved by Humidity, and excited by Heat: The Acid, as being igneous, begins to act upon the Alcaly, to which the Humid also comes, and the *Rector*, by the assistance of Heat, informs it: So invisibly, the Acid assumes the Alcaly, and the Alcaly again swallows up the Acid, *they tend to each side*, as *Ferments* do, yea they cease not, till they have finished their several and prefixed Courses for their proper ends; *one Spirit draws, another protrudes*, as *Hippocrates* in the fore-cited place.

The Mystery of *Fermentation* was heretofore hid on purpose.

So that, the Humidity of every Vegetable, contains *Acid* and *Alcaly*; in some, the *Alcaly* predominates, in others the *Acid*: The *Acid* is most known, but the *Alcaly* yet known to few; which I will now demonstrate to the Eye, in the sweet expressed juice of Grapes, as most known; wherein, the first days the *Rector* is Dormant, who, a while after, applying the Mechanical Organs, the *Acid* begins to Corrode the *Alcaly*, and This absorbs the *Acid*; and so there happens a vehement Contention and Fight, which from the Heat or Boyling is called *Fermentation*, which lasts till the *Acid*, as Victor, hath overcome the *Alcaly*: In this Fight both the Faculties (or Tastes, or Sapors, Instruments, Mechanical or Architechtonical, call them as you please, or else the Archeus, or Innate Heat *&c.*) undergo a great overthrow, there being made a mighty slaughter, the *Acid* being swallowed

Fermentum, quòd fervendo crescit.

ed up, deſtroyed, and enfeebled by the *Alcaly*, both mutually fall in a mutual embrace into a Cadaver (in reſpect of Wine) which is called *Tartar*.

If you Diſtill this *Tartar* out of a Retort, the *Acid* is excited by Heat, and begins again to act upon the *Alcaly*; and This likewiſe on the *Acid*, and ſo a new *Fermentation* begins, for which you muſt uſe a very ſlow fire, and though the Receiver be great, yet the incondenſible Odor of the Fermentation (which *Helmont* calls *Gas*) is perceived a far off; yet at laſt, the *Alcaly* overcomes the *Acid*, and doth plainly abſorb it, and both of them, for the greateſt part are fixed. The Liquor and Oyl in the Receiver are Saturated and Impregnated with Volatile *Alcaly*, which is of excellent uſe of it ſelf, yet known to few. If you again re-infuſe the Diſtilled Liquor and the Oyl upon the *Caput Mortuum*, then the Volatile *Alcaly*, which the Liquor did contain, is drunk up by the *Acid* in the *Caput Mortuum*, and becomes fixed, but that which then re-diſtills out, will be of greater Affinity, to the Element of Water, and ſo of leſs efficacy. But the former here, as every where elſe, grievouſly miſtakes, for he ſays, *That Common Spirit of* Tartar, *which is not rectified from its remaining* Caput Mortuum, *is by no means to be accounted for pure Spirit of Tartar.* Spirit of Tartar. *Mantis Herm.* f. 74.

From this his Rectified Spirit of *Tartar* (and out of his own inſipid Brain) he compounds a Medicine, truly lamentable, which he calls, *A mixture of Three, from the Spirits of the Minerals.* *Mantis.* f. 750.

Firſt, The Volatile *Alcaly* in the *Tartar*, is Saturated with the *Acid* of the Sulphur of *Antimony*; That he calls the *Tartarized Spirit of Antimony*, if by chance, ſome of the Volatile *Alcaly*, do yet remain, what doth he then? He mortifies it with Vinegar from *Verdigreaſe*, and the Acid of *Vitriol*; whence this hurtful, though artificial and unprofitable Compoſition, conſiſts of Elementary Water and Vinegar; this mixture the Ancients called *Poſca*, to which the Reformer adds nothing, but the ſtinking ſmell of *Tartar*. But the Spirit of *Tartar*, being prudently Diſtilled by an Hippocratiſt, is not *Acid*, but ſomewhat bitter, and full of Volatile *Alcaly*; on which, if you poure

Spirit

Spirit of *Vitriol*, it waxeth hot, that you can hardly hold the pot in your hands; which is an evident ſign, that the Acid of the Vitriol hath drunk up the Alcaly of the *Tartar*; as it happens when water is poured on Lime, and as in the ſlacking and heating of Lime, the Salts dye, and it degenerate into a *Neutral*; the ſame is to be underſtood of Spirit of *Tartar*, with whatſoever Acid it be mixed; ſo my Maſter *Hippocrates* teaches.

Things thoroughly mix'd, undergo alteration. *L.* 1. *de Diæt.*

I return now, whence I digreſſed *(i.e.)* to the Chymical Fermentation of Wine, for whoſe ſake, the Tartar fell to the bottom, as a Cadaver; But the *Acidity* ſpread through the Liquor, hath dominion over it, and doth defend it, and is called *Wine*, the Acidity whereof, is grateful to the Palate, becauſe of the *Alcaly*, with which it is joyned, and tempers the Acid, till at length the Acidity, weary of the Alcaly, or excited again by Heat, ſtrives to overcome the *Alcaly*, and ſo a new and inſenſible fight begins, and the Wine foures more, and is called by a common name, *Vinegar*: from which if the *Acidity* be ſeparated in a Limbeck, and the bottom burnt by fire, then the *Alcaly* is found out of that Tartarous bottom, though it ſeem impoſſible to ſome, to find *Alcaly* in ſo great an *Acidity*; yet it is true, and it is That which the Philoſopher means, when he ſays, *That it is impoſſible there ſhould be any matter, under which there ſhould not be ſome form.*

Without Art, there is not found a pure *Acid* in Nature unmixed with *Alcaly*, and on the contrary. *Hippoc. l.* 1. *de Diæt. Auſt.* 1. *Phyſ.*

Pour or ſuperadde Diſtilled Acid on this Alcaly, and evocate the watery flegme, having the ſmell of *Aqua Ardens*, or *hot water*, then from the *Acid* and the *Alcaly*, you ſhall have a re-generated *Tartar*, which out of a Retort, yields a fat Oyl, and a bitter Water, full of *Volatile Alcaly*; out of the Phlegme, through a Phyal of a long Neck, evocate the *Fat* burning watery part, which we call *Aqua vitæ*; the other part is elementary water; the Fat re-aſſumes the *Alcaly*, out of which again, extract the Elementary Water, and repeat this operation, and the whole ſubſtance of Wine paſſes into Water and Elementary Earth, void of all taſte and ſmell.

So the Rector by degrees vaniſhes from our External ſenſes into nothing, that Man cannot find out the work which God operates. *Eccl.* 3. 11.

Hence it appears, that the Juice of Grapes hath pre-

preſerved the *Alcaly*, and the *Acid* (in which the Rector doth inhabit) in various hazards, and ſeveral alterations, even unto its laſt annihilation.

CHAP. XIX.

An untrodden Path diſcovered.

THat which I have ſpoken in the precedent Chapter concerning the Juice of Grapes, the ſame is alſo to be underſtood of the Juice of all Vegetables; for in them all there is *Acid* and *Alcaly*, more or leſs, as *Hippocrates* and Experience alſo ſhew; but with this difference, that in thoſe Vegetables, which we call *Cold*, the *Alcaly* doth predominate, and they are not fermentable, unleſs by the help of an outward *Acid*, or being excited by heat; but in thoſe which are *hot*, the *Acid* prevails, and therefore they are eaſily fermentable, as in the Progreſs will appear. Alſo the *Alcaly* of *ſome* Vegetables is nearer to *fix'd*, and therefore it joynes in with *Acid Minerals*; as I have ſhewed in Galls, in the greater Houſleak, in Rinds of Pomgranates, *&c.* The *Alcalyes* of *others*, are much more delicate, ſo that *Acid Minerals* do preſently abſume them, in as much as they are nutritive and fit for the digeſtion of Animals, which conſiſts in a milder *Acidity*: of which ſort are *Winter-green*, *Sanicle*, *Bettony*, *Fole-foot*, &c. Which therefore are called *Vulnerary* Herbs, whoſe *Alcaly* reſtrains and hinders the injuſt *Acidity* riſing in the Stomach, as it leſſens it alſo in wonuds, becauſe all *Acidity* out of the Stomach, is hurtful, morbous, and accompanies putrefaction, which the Vulgar call *heat*, from the effect, for it cauſes a Feavour, and putrefies Wounds; many skilful Chyrurgeons have taken notice of that *Acidity* in wounded men, as the beginner of heat and putrefaction, and have therefore forbade them the uſe of Wine, and not without cauſe, leaſt the ſubtle and evaporable *Acidity* of the Wine ſhould encreaſe the Diſeaſe, I ſay, the *Alcaly* of

All things are corrupted mutually by themſelves the greter by the leſs, and the leſs by the greater. *Hipp. L. 1. de Diæt.*

Nature delights in its like nature.

these is not discovered with *Acid Minerals*, but because they themselves are Nutritive, therefore the said *Alcaly* associates it self with its similary Nutritives, and with gentler *Acids*, than *Minerals*. As for Example, Dissolve a drachm of *Sal Saturni* (made with Distilled Vinegar, for that resists not the Digestion of Animals) in about three Ounces of Distilled Water, which hath no *Volatile Alcaly*) of *Rosemary*, *Lavender*, *Rue*, &c. Suffer the Lees to settle: This Solution being sweet in taste, contains Occult Lead; drop the clear Juice of the foresaid *Vulneraxy* Herbs, into this clear Solution, and it presently grows as white as Milk, which is a sign that the *Alcaly* of the Herbs absorbs the *Acid* from the *Lead*, which falls by degrees.

For as fixed *Alcaly*, præcipitates *Mercury*, and *Alcaly*, nearer to fixed, præcipitates Vitriol, as I have shewed before: so also here, a milder *Alcaly* requires a milder Examen.

Paracelsus his *Analytick* knowlege of Bodies.

Paracelsus, first observed That hidden *Alcaly* of Herbs, and it is probable that by the like Examen he took notice of their several minute degrees; he had taken notice, that in wounds, putrefaction came from *Acidity*, and from thence, arose feavorish heats, and corruptions of Wounds; he also first prescribed Vulnerary Potions, and did happily restrain the said *Acidity* and *putrefaction*, and called the Herbs *Vulnerary*. And though *John Taugaultius*, a French Man, and *Gabriel Fallopius*, an Italian, both famous Physicians, and excellent Chyrurgeons, do condemn and endeavour to explode Vulnerary Potions in the Cure of Wounds, affirming, that by their heat they inflame, and extenuate the Blood, and excite its eruption from the Wound; yet though *simple* Vulnenary Medicaments are not known to every Chyrurgeon, and and are prescribed without distinction and knowledge of their degrees (for all cannot attain this pitch of Science) nevertheless Experience shews, that the aforesaid Potions are useful; with which, also *Paracelsus* cured the Ulcers of the *Lungs*, (as Histories witness,) and also the *Hectick Feavor* (as I have also experimented) which

Ulcers of the Feet or Thighs, and Wounds, are Cured by Potions; why may they not do the same in the Lungs?

is

is an universal and inept *Acidity*, and that of the solid parts, which in one word, we call *Heat*, and which, the aforesaid Alcalys do more readily absorb and consume, than Milk; as I have shewed in its place, and the cure it self demonstrates.

Therefore Vulnerary Potions are not to be rejected, but used with good Success, in the curing of Wounds.

Many of the accuratest sort of *Chyrurgeons*, and *Physicians* have taken notice, that *Acidity* is the cause of Heat and Pain; as also that burnt Harts-horn absumes in it self Vinegar, and other Acids of all sorts, whence it comes to pass, that it is given with good success in *Feavors*, in a great dose, from half an ounce, to an ounce, in any cooling water, containing Volatile *Alcaly*; For, as they have observed to their great joy, that the said *burnt Harts-horn*, absorbs and imbibes the Acid Volatile Salt from Vinegar, so it takes away the Acidity accompanying several sorts of *Feavors*.

The brevity of this Compendium will not allow me to discourse of Specifick Acid. Yet see *ch.* 21.

Besides Vulnerary ones, there are also more Occult and Volatile *Alcalys* in Herbs, which we call *Cooling*, as *Lettice*, *Purslane*, *Colts-foot*, *Endive*, and its species; whose Alcaly, is very Fugitive, and is found, not only in their Juices, but also in their Waters carefully Distilled: Whence we may learn, that such Herbs being *dryed*, are of no value, because their *Alcaly* hath evaporated.

Occult *Alcalys*.

So also the Distilled water of *Frogs-Spawn* (the whole Spawn with Patience is elevated in *Balneo* into a pure water, the black and dry Grains or Specks, being left behind, which are not to be rejected) doth abound with Occult Volatile *Alcaly*, and doth presently precipitate *Lead* out of the aforesaid Solution, more readily, and copiously, than any other cooling water: This water is much to be esteemed in many diseases, arising from a peculiar Acidity: I have known a desperate Hemorrhage from the Womb, happily cured by it, in as much as at first it sucks up the Acidity of the Blood, afterwards it restrains and expels it.

Cooling waters have an occult *Alcaly*.

Also this water applyed to the grieved part in the *Feet-Gout*, presently asswages the pain, in as much as it mor-

tifies and alters the Acrimony: But when the pain is more violent, then the Acidity is in greater quantity and vigor, and the Volatile *Alcaly* conſuming the cauſe of the pain, then muſt needs, be more manifeſt, for it indubitably takes away the pain; whence we learn, that the cauſe thereof proceeds from *Acidity*, if otherwiſe, *the principal indications are to be taken from things helpful and nocent*, as *Avicen* teaches.

Volatile *Alcalys* eaſe the pains of the *Gout*.

Fooliſh therefore, and almoſt Frantick, is the opinion of certain Canonical *Phyſicians*; who, againſt the Doctrine of *Hippocrates*, out of ignorance do fear, and perſwade the ſimple, that a greater miſchief is occaſioned by undertaking to Cure by contraries, and by endeavouring to repel the *Catarrh*, by ſuch Simples.

For *Hippocrates* ſhews, that Volatile *Alcaly* is empty and void, and that it takes away all pain of the *Feet-Gout*, (I mean not the knotty and coagulated Gout) all *Arthritick*, *Nephritick*, *Sciatick*, and ſuch like pain, in a very ſhort time, if it be but outwardly applyed, in as much as it preſently imbibes and aſſumes (being impatient of Vacuity) the Acidneſs, which is the cauſe of the pain.

The knotty *Feet-Gout* doth coagulate, as the *Stone*, at leaſt by a diverſe Acid.

But not only waters, Diſtilled from cooling Herbs, but alſo common water both of Wells and Rivers, contains an Occult *Alcaly*, by means whereof it nouriſhes Animals and all Plants; *Red hot Iron*, *quenched in water*, *acquires ſtrength thereby*, as *Hippocrates* teaches in the fore-cited Book, and daily Experience ſhews; for Iron hath too much of the Volatile *Acid*, whence it readily paſſes into Scoria and Ruſt, but when the Acid is imbibed by the Alcaly, then it is made more compact, and reſiſts more; therefore Cutlers of Knives and Swords, anoint their work with ſhavings of Horns, heating their blades till the ſhavings melt, and thus they draw the *Alcaly* out of the Horns, and their blades become ſtronger. Hence it is, that ſuch as paſs by their ſhops, do ſometimes perceive the ſtinking ſmell of burnt Horns. But it is eaſily proved, that an Occult *Alcaly* is in common ſimple water, by the fore-mentioned ſolution of *Sal Saturni*, which preſently grows white thereby: So, if

Hippoc. l. 1. de Diæt.

Simple water doth nouriſh, and there is a great Secret in water, as *Hermes* ſaith.

Let Canonical *Phyſicians* obſerve, that the Alcaly of common water, doth not aſcend in a Limbeck. Wherefore, diſtilled, it cools not, as the water of Frogs-Spawn before ſpoken of.

Silver

Silver be diſſolved in *Aqua Fortis*, and you add ſimple water to the Solution, it preſently waxes white as Milk, but when the ſame water hath been diſtilled, then the Alcaly, doth not aſcend, neither doth the Solution of Silver grow white any longer thereby. For which cauſe *John Baptiſta Porta*, adviſes Water to be twice, or thrice diſtilled, for a Tree of *Silver* and *Mercury*, which the Vulgar fooliſhly call the *Philoſophers Tree*: So alſo Water diſtilled from *Cephalick* herbs, doth precipitate neither Silver nor Lead from the above-named Solution; For theſe, as I have ſaid, contain not Alcaly in their Juices; So that the Water, diſtilled only, from cooling Herbs, as alſo common water not diſtilled, do contain a Volatile Alcaly; by means of this Alcaly, Water doth nouriſh: Hence *Lactantius* ſaith, *From Water are all things*; which, before *Hippocrates*, *Thales Mileſius*, alſo knew, perhaps by the benefit of this Art, as *Laertius* witneſſeth in his Life; So the Ancient *Hermes*, *Water*, ſaith he, *is ſuſceptible and producible of Nutriment in Men, and other creatures*: And *without Water, Nature operates not, &c.*

Lib 5. *Magnatur. c.* 3.

L. 1. *c.* 5.

Now becauſe our diſcourſe is fallen upon Cooling Waters, I ſhall not paſs over in ſilence the abuſe of Roſe Water, which is ſaid to cool, but it is diſproved by this Experiment.

At *Venice*, Roſe-water, as commonly all other waters, are diſtilled out of a Copper Veſſel (ſometimes lined within with Tinn, though oftentimes the Tinn, for age, is worn away.) This Water is preſcribed to Children, becauſe it kills, and expels Worms, and ſometimes provokes Vomitting, which Operation, and Vertue, is Vulgarly aſcribed to the Roſe-water, whereas Roſe-water is not ſimply cold, but of a temperate nature, as containing an occult and inſenſible Acidity, which is unſeparable from it, never leaving it, till it be annihilated; but in flowing through a Copper Limbeck, its Occult Acidity abrades and takes off certain Atomes from the Copper, which are inviſibly mixed with the water; if you would diſcover or ſeparate the Copper, drop into a little quantity of this water, one or two drops, of the Alcaly of Urine, and preſently all the water turns green,

Roſe-water doth not cool unleſs it be diſtilled through Lead.

Green, becauſe the Acidity of the water doth more greedily catch the light Alcaly, more ſimilary to it than the Metal, which therefore by little and little, ſubſides into a greeniſh bottom; Then the ſame water, doth no longer provoke Vomit, nor kill Worms, but will be like *That* which is Diſtilled through Glaſs Veſſels; but melt the green bottom with *Borax*, and then it returns to Copper again.

All Pot-herbs contain a *Volatile Alcaly* and cooling, and, as all wound herbs beget Milk in Nurſes; for *Acidity* is an hindrance to Milk.

Neither is this Occult Nutritive *Alcaly* found only in Vulnerary and Cooling-herbs, but in all Pot-herbs whatſoever, which are therefore deſired by the Stomach, abounding with *Acidity*. This *Alcaly* is the cauſe that ſuch as eat boiled Cabbage or Coleworts, before a fit of Drinking, are ſeldom inebriated, for the *Alcaly* of this Herb, as it moderates the inebriateing *Acidity* of the Wine in the Stomach, ſo it abſorbs and conſumes That in the Glaſs.

Specifique Medicines.

But why certain ſimples do ſpecifically Cure ſome Diſeaſes, as the Juice of Yarrow, the Hæmorrhoides; Fumitory, the Jaundies; Butchers Broom, the Diſtempers of the Urine; Guajacum and Sarza, the French-pox, and the like; and wherein all the Faculties of Purging ſimply do conſiſt; it would be tedious to declare in this place, let it ſuffice to have given ſome ſmall hint of it, at leaſt in this Writing, wherein, even againſt my will, I have been inforced to diſcover Salts hitherto Occult.

Objection.

But I hear ſome whiſpering an Objection, that I endeavor to ſhew the Volatile *Alcalyes* of Vegetables with diſſolved Lead, whereas all Salt things do alſo precipitate Lead from this Solution (as we have confeſſed before) but with this difference that the Lead falls down with the Salt in the form of a Powder: Diſtil the clear ſwimming upon the top, and you will have Vinegar, which carryed the diſſolved Lead, but it falls from the Vinegar, becauſe Salt hath a greater affinity with Vinegar than Metal; but mix the *Alcaly* of the Herbs, or rather drop the Juice of the aforeſaid Herbs into that Solution of Lead, then it doth not haſtily fall down in form of a Powder; but becomes as a Pultiſs: Diſtil the

the ſupernating Liquor, and then you ſhall draw from it, not Vinegar, but an Inſipid Water; which is a manifeſt Argument, that the *Alcaly* hath ſuckt up the *Acidity*.

How much Light this Hippocratical Doctrine may give to a Phyſician, as well in compounding Medicines (that one ingredient hinder not another, yea the Vertue of Simples may by this Knowledge be wonderfully exalted) as in Curing Diſeaſes, let thoſe judge who know how to diſtinguiſh Taſtes and Sapors, and moderately to invert and vary them, which at preſent I ſhall only demonſtrate in that one Example of the Nettle, which being freſh and moiſt, ſtings and bliſters, but dryed, aſtringes, and ſtops blood: the Juice thereof is coagulated in diſſolved Lead, into a Black Gobbet, which again in fixed *Alcaly* is preſently diluted into an obſcure, but penetrable colour; whence we learn, that dryed Nettles boiled in *Alcalizate Lye* (yet ſweet as they call it) do hinder Gray and Hoary Hairs, if every day they be kembed with them; with *Vitriol*, it again concretes into yellowiſh clots, which, with the Spirit of the ſame Vitriol, are again diſſolved into a clear and pellucid Liquor. Such, I ſuppoſe, were *the hidden vertues of Roots, and the differences of Shrubs*, of which *Solomon* ſpeaks, *which he learned from the wiſe Artificer of all things, in his Diſputation from the Hyſſop to the Cedar of Lebanon*; for it is not credible, that He unneceſſarily diſcourſed of firſt Qualities, and of Elementary Degrees, which our *Botanicks* boaſt to meaſure, as it were, with their tongues: of *Theſe* it cannot be ſaid, that they are, *hidden vertues*.

Solution.

Vertue of the Nettle.

This is the meaning of that Speech of *Arnoldus de villa Nova* (though on other accounts, his Works want correction) *Where Simples are at hand, 'tis deceit to uſe Compounds*: Whileſt I heretofore applyed my Self to this ſtudy, I was much aſſiſted by that Eminent and Skilful Botanick, and diligent Apothecary, *Johannes Maria Fero*, of this City, who, with ſingular Care and Study gathered together all ſorts of Vegetables, to whoſe Induſtry I do owe very much, and accordingly I render him my real and hearty thanks. By

In *Aph.*

A Powder against a Quartan.

By the help of this ſtudy, I have alſo found out a Compound Powder, equivalent to, if not exceeding, the vertue of *Chinella*, in a *Quartan*, as they can witneſs, who have bought, and uſed it, in order to their Health.

CHAP. XX.

The Spiritual Repreſentation of Plants.

Out of what hath been ſpoken and declared, we may diſcover the foundation, on which the Spiritual Regeneration of Plants ought to be built, of which *Quercetan* ſpeaks in his Book againſt *Anonymus*, which he ſaid he had ſeen at *a certain Cracovian Phyſicians, who knew how to prepare the aſhes of every plant ſo Elegantly, and how to preſerve their Spirits (the Authors of their Vertues) ſo Exactly; that, having above thirty of them in ſeveral Glaſs Veſſels, Seal'd with* Hermes's *Seal, if any one aſked to have a Roſe, or a Marigold ſhewed him, then he would put the bottom of the Veſſel, wherein was the Roſe-aſhes (and the like of any other Flower, which he was to ſhew) to the Candle, to warm it a little, and then that fine and impalpable Aſhes of it ſelf, would repreſent the evident form of a Roſe, encreaſing and growing by degrees, manifeſtly exhibiting the figure of a living floral Roſe, which ſhadowy repreſentation, when the Veſſel was removed from the heat, would again return to aſhes. This Secret*, ſays he, *I ſought after with great ſtudy, but could never attain it.*

The Vulgar burn by Fire, the Chymiſts by Water.

But this Spiritual Reſuſcitation of Plants, ſeems not ſo difficult to the Hippocratical Philoſopher, eſpecially when it is proſecuted, not with a violent, but a ſoft fire, therein imitating Nature, as our Maſter teaches. I have invented a way for it, which yet by reaſon of the incommodity of this place, for ſuch kind of Studies, I have not confirmed by Experience: yet for the ſake of the Curious, I will here ſet it down.

I have Ocularly demonstrated out of *Hippocrates*, that *Acid and Alcaly*, the Architectonick Instruments of Nature, are in all sublunary things; These, when they are not subjected to the Artificer, but left to the government of Nature alone, then That subject encreaseth and grows strong, as the meanest Flint declares, of which I have spoken in his place: If then it encreaseth and grows, of necessity the Acid, and * Alcaly must have something, which directs their Operations to their proper ends.

* I have elsewhere shew'd that the Spirit, is the Bond joyning Soul and Body.

This, I elsewhere call the *Rector*, give it what name you please, provided we understand the thing; for I shall not quarrel about words. These Three, *Hermes*, that most ancient Philosopher, calls Body, Spirit, and Soul; So that these Three are latent in that Terrene Receptacle, which represents to us the figure of a *Seed*.

Nature is like in every thing, as *Hermes*, *Pythagoras*, and a terward, *Hippo.* teaches.

Let half a pound of this *Seed*, for instance of *Poppy*, from a full flower or head, be gathered in fair weather, which you must keep in a temperate place till the next Spring, then in the Evening, observe the clearing of the Sky, whether it promise a fair Night, for the Night must be fair wherein the Seed is to be exposed on a large board of Glass, with the edg turned up, that it fall not down, and placed in a Meadow or Garden full of divers Flowers and Herbs (for unless the soil be fruitful, the Dew will be but barren) In the Morning before Sun-rising, you must carefully take away the Seed, now moist with Dew, from the Glass-Board, and put it into a Phyal, fit for that purpose, having its mouth close sealed with Wax, and so keep it, least the Dew should evaporate (which is very light by reason of the Spirits) these Spirits in the following Chapter I shall shew *, being occultly Acid and Volatile, yea being the hidden Food of Life; with which the Dew is so impregnated in the Air, that when it is included in an Egg-shell, and put upon a * Spear placed obliquely, then the Egg is lifted up by the heat of the Sun, to the top of the Spear (as * *Hildebrand* teacheth) but that the said Dew may be sucked up by the Seed: Afterwards in a clear Night, re-expose the said Glass-board with the Seeds, into the aforesaid Meadow, that it may re-attract and draw in the Dew, which you must also a-

They were small Vessels, says *Quercetan.*

* See *Cosmopolita.*

* Which I think ought not to be round.

* *In Magia Natura.*

again ſeal up in the aforeſaid Phyal, before Sun-riſing, that it exhales not; ſo the Seeds by little and little, by means of the Dew ſuck'd in, will begin to ſwell and be turgid, the Acid and Alcaly, acquiring ſtrength from the Dew, and Heavenly Influences, which the Rector will then begin to direct. Let this ſetting out, and taking in, of the Seeds, be ſo long repeated, till the Signs of Germination and Vitality do appear. In the interim, whileſt theſe things are a doing, you muſt, in the ſame Meadow, ſtretch and ſpread abroad clean Linnen-cloths, on wooden-ſticks, and ſo gather the Dew on them, and wring it out, keeping it in a Glaſs Veſſel well ſtopped, which in its Settling, will afford or depoſe ſome Fæces (from the ſmall duſt flying up and down in the Air): of this pure Dew, pour as much on the Seeds, as may be about an Inch above them, and ſo place them, in a Vaporating Bath (for * *Raimund* teacheth, *That what Nature doth, by the heat of the Sun and Stars, the ſame it will do by the heat of Fire, provided it be ſo ordered, as not to exceed the motive and informative Vertue, which is in the matter of the Celeſtial Influences*) ſtopping the mouth of the Glaſs with melted Sulphur: The Acid and Alcaly, in the Humid and Calid, then begin to act upon one another, and ſo they will be freed from the Earthly body of the Seed, in which they were included; and in the ſpace of a few days, this natural Compoſition, will wax Green at the top (as it happens to Stagnant Waters, in ſhadowy places, by the ambient heat of the Summer.) Under this Green Film, is the union of the Faculties perfected, which I have ſhewed to be Volatile, and together with the Rector, unſeparable from the Acid (being immortal *per ſe*) which union may be called *Confermentation*.

* In Teſtam. c. 24.

A. Hipp. l. 1. of Diet.

The Receptacle, or body of the Seed, will be a dead Subſtance, which in a few days will ſuck up the Viridity, (*i. e.*) the Bubbles of Fermentation, with the Superfluous Liquor (as we ſee in Pools, growing green at top) and by little and little, it is turned into a moſt fine Powder, like Aſhes, when it is come to a ripeneſs. This Veſſel, being warmed (ſo doubtleſs *Quercetan* ſaw it) the Levity of the Dew, being Confermented with the *Rector*, and

the

the Faculties of the Seeds, will repreſent the image of *Poppy*.

The mouth of the Veſſel, if it be melted with Glaſs, I judg, will never decay, and becauſe the Practick part doth not attain to, nor follow the Speculative, word for word, there is therefore need of a Skilful and Ingenious Operator. Hitherto, as I have ſaid, I never had a fit place at *Venice*, to make this tryal, nor ever ſhall, for want of fruitful and pure Dew, which is here troubled by the continual ſteaming of * *Halinitre* (as the Walls of all the Houſes ſhew) with which, the very Dews being alſo ſubtle exhalations (as *Ariſtotle* teacheth, and our own experience confirms) are mixed, and ſo they fall down mix'd again,

* *Halitre* is made of Exhalations of ſtinking Urine, and other mixtures, embracing one another. *Lib.* 1. of *Meteors.*

Such a ſhadowy Regeneration of things, was hid by *Paracelſus* (being illuminated in this Natural Hippocratical Doctrine) under the Vail and Metaphor of the Generation of Man, whom, certain Grandees of Phyſick, being ignorant of this Doctrine, underſtanding litterally, judged him, as an Impious Man, to Baniſhment.

Senner. de Conſil. Edi. C. 4.

I add, that in the whole School of Philoſophy, there is nothing, though never ſo diligently ſought for, which doth more lively demonſtrate to us the Myſtery of the Reſurrection, than theſe proper inſtruments of Nature, being cleanſed from their Refuſe, by an Hippocratiſt, and again conjoyned, re-united, and re-produced, if the ſaid Myſtery be at all demonſtrable by Natural things.

CHAP. XXI.

A Summary Rehearſal of what hath been ſpoken.

THe Alcaly, and the Volatile Acid, in the family of Vegetables, are burnt together by Fire, into a Fixed, or a truly Alcalizate Salt. The way is indeed promiſed by the Reformer in his *Manuſſa Hermetica*, in lofty words, but no where to be found; in the mean Fol. 788.

time, he finds fault with those Salts, whose ashes are burnt with Sulphur; and he blames *Hartman*, *as a bad Writer, and says that nothing can be more foolishly taught*, than to mix Alcaly Salts, with Acids (as if he himself had not taught to mix the Alcaly of Vipers, with the Acid Spirit of Salt; as also the Spirit of Vitriol, with the Alcalizate Salt of *Wormwood*, under the title of *Coagulated Spirit of Vitriol*: and again, in his *Appendix* f. 100. he extolls, such mixed Salts, with great Praises) and a little after he again admits Ashes to be calcined with Sulphur: When uncertainty is the Mistriss, what can be chosen?

In his *Appendix*. fol. 101.

Mantiss. f. 788.

Know then, that no Vegetable hath any fixed Salt, of what kind soever, unless it be burned with actual Fire; So that the Acid, in burning, may act upon, and apprehend the Alcaly, and likewise the Alcaly on the Acid, as I have shewed in Juice of Wine, and its Tartar: As may be seen in rotten Wood, though you reduce it, never so carefully to Ashes, in what fire soever, you will never get Salt out of it; for the Acid, and the Alcaly, being both Volatile, are already absumed by the Air, and have left nothing but an unprofitable *Cadaver* behind, but if it be burnt before Putrefaction, then you may obtain your desire.

The Air doth Volatize.

Wherefore our chief care and labour in this Work, must be, that the Herbs may be fresh, and not withered; for then, in burning, the innate Humidity, when it boils up, doth dissolve the Acid and the Alcaly, which, being dissolved, do act mutually one upon another, and one apprehending the other, they are both fixed, according to the property of the Concrete: But that part, which flies away with the flame, and was not catched by the Acid, turns into Soot, from whence, you may by an easy Method, draw forth Volatile Alcaly, but never Fixed Salt, yet by ingenuity it is reduced to a Consistency.

This action may be called *Fermentation*, for the instruments of Nature are changed.

This action deserves to be called *Fermentation*, for both the instruments of Nature are changed into one *Artificial*, which, as in the Sope-makers and Glass-makers Art, is turned with the Acid, its contrary, into a Neutral thing; so also it happens in Man's body, when it is admini-

administred, with its contrary, by a prudent and Hippocratical Physician; *for it is the same Operation*, as our Master teaches. *L.* 1. of Diet.

Take Green *Wormwood* for an Example, when it is green, set fire to it, and kindle it in a Chimney, or open place, but take great heed that it doth not flame out, tis enough to turn it only into Ashes, which, after the burning, put in an Earthen-pot, large, and low, or also upon an Iron-plate, the edges turned up, and Coals being kindled under it in a Wind-furnace, that the Vent-hole, or Portal, as need requires, may be either opened, or shut; Stir these Ashes with an Iron Spatule continually, till they be very white, and then lay them in a Linnen-bagg Acuminated (or if there be but few, on Acuminated Paper) and pour on Common Water, which as it runs through it, being pregnant with Salt, is called a *Lye*; coagulate this strained *Lye* in an Iron Frying-Pan (not greased in the Kitchin) with a quick Ebullition, and make it up into a Lump, and when it is as thick, as Honey, continually stir it with a Spatule, and it will be dryed into a grey Powder, which presently put into a Pot not glazed, the mouth of the Wind-furnace being stopped, and cover it with small Coals, mixed with their powder, and leisurely heat it, scarce to Brunity, or Browneness, but not that it may melt, then cool it, and put the Salt, into a Glass Vessel, that it may be dissolved in a sufficient quantity of Water; stir it oftentimes with a Woodden-stick, then suffer the Solution to rest, two or three days, and when it is clear from the Lees, without much stirring, pour it out, and in a Leaden, or Glass Vessel, placed in Sand, suffer the Water to exhale, without Bubbles, till a Saline-Cuticle grow a-top; then remove the Vessel, and the next Morning, gather together the shining grains of Salt, which you must swiftly wash in clear water, and then dry: put again the remaining *Lye*, in the Sand, that the water may exhale, as before, unto the Cuticle. Both these Salts are to be kept together, in one Vessel, which being prepared after this manner, do resemble the Crasis and Disposition of their Concretes. The rest of the *Lye*, being of the taste of Urine, and of a stinking smell, is to be left to wash Glasses. This

This is the eaſy and natural way of preparing Salts of Vegetables, which do never melt of themſelves, nor are of an ungrateful taſte: A Pound of theſe Aſhes, will yield near four ounces of the pureſt Salt; but four pound of the Aſhes of dried Herbs, will ſcarce afford an ounce of Salt.

What Herbs yield *Alcalyes*, Salt or Acid, I have ſufficiently ſhewed before.

Alcalyes, out of Vegetables, are made after the ſame manner, of which yet ſome are eaſily turned into Liquor, for they are empty, and therefore deſire to be ſatiated from the Air; as I have hinted above in the Occult Acidity of the Air, which may ſuffice.

Mant. f. 789.

The Reformer teaches, that the aſhes are to be boiled, and the Lye thickned to Siccity, and afterwards committed to the melting fire, without *diſcretion*; So, in the place of the Vegetable Salt, there always comes an empty and cauſtick Alcaly; for the Salt of *Wormwood*, in its Fundamental Point, is of the Acid Salt, and not purely fixed, as I have ſhewn; but if it ſuffer Fuſion, then both Taſtes or Sapor act upon one another, and are fixed into an Alcaly, as it happens in all Acid Salts made by Art; wherefore from the Regimen of Fire alone, things are altered, and they change their Name, Vertue and Efficacy. This is the cauſe, that the vertues of Salts, prepared by ignorant Perſons, are never equal, *viz.* when they are Alcalyz'd, they are commended by the Unskilful (for example, Salt of *Wormwood*) to have done good in the *Collick* (which then came from Acids, which had been drank) but when it is prepared from Salt-Acid, and Volatile to boot, by the Skilful, 'tis good for the Stomach, and againſt Old Obſtructions, and is then the Baſis in the Cachectique Powder of *Quercetan*. The cauſe is aſcribed to Noxious Humours; So, many Salts, are made fixed, if they be managed with a due Heat, and with all Requiſites, as the Subject can bear, which otherwiſe were Volatile; for the fixation of Blood requires one kind of Heat and Inſtruments; the fixing of *Nitre*, and *Arſenick*, another; when the whole Nitre, by Odor only, is turned to Earth, it requires another Tractation; when *Mercury* of it ſelf, doth as it were grow fixed, there is need of another Fire, and Veſſel; there are other Requiſites, when

Fire is a Publick Profeſſor.

A *Cachectick* Powder.

All things are done by them through Divine Neceſſity. *Hipp. l. 1. de Diæt.*

when *Antimony* and *Sulphur* are fixed; So alſo there is another operation of Salts, which are all Volatile, as I have ſhewed in Rotten Wood.

This is the reaſon, why the wiſe and prudent Senators of *Venice*, do cauſe the Timber, of which they make their Ships of War, while it is green, to lye under water many years, in their gallant and well-provided *Arſenal*, leaſt the Air ſhould penetrate it, and by this means, under the water, it becomes almoſt as fixed and as hard, as ſtones. The *Venetians* Ingenious.

But if it begins to be quailed in the Air, before it be watered, then they muſt burn it a little, that the Acid and Alcaly, may be melted together, and as it were incruſtrated; and ſo it will endure many ages and never rot: In like manner thoſe pieces of Timber are incruſtrated, which are rammed into the Earth for Foundations of great Buildings, leaſt they ſhould rot.

The Gardeners in theſe Iſlands do reduce their Herbs, being dryed, in the Air or Sun, to Aſhes; and ſell the aſhes on their Words and Credit to the Apothecaries: who, finding they can get little, or no Salt out of them, do blame the Gardeners, alledging they were naught; Their anſwer is, that in Tranſporting the Aſhes, the Sea-water hath robb'd them of their Salt: many do eaſily believe this Excuſe, being ignorant of any other cauſe.

But when freſh Vegetables are reduced to Aſhes, as is done in *Lituania*, *Scandia*, and *Muſcovy*, for Pot-aſhes, then, in the Igneous Ebullition, the Acid and Alcaly apprehend one another, are melted and fixed together. But when they are urged with a melting fire, as the Reformer teacheth, then they change their Nature, and are turned into Vitrifying Alcaly, as * *Zoar* hath obſerved: which yet was not much leſs fixed in the Concretes, before they paſſed through the fire; which again by Inverſion, doth not only put on Volatility, but is alſo reduced into Elements, as I have ſhewed in the Alcaly of Tartar. To this ſenſe *Baſilius* ſpeaks of *Sal Armon.* When my Wings are cut off, and I am prepared to the *Bath.* * On *Exod.*

But if Alcalyes, be boiled with their proper Diſtilled Oyls, in a juſt proportion, obſerving a due time, with an artificial and occult Circulation, and in a fit Veſſel, they afford *Ens Mirabile*. So Oyl of Cinnamon, being abſorbed, Oyl made Salt.

absorbed, by its proper Alcaly (being deprived of its Veſtiments) effects in the *Palſy*, and ſuch like Diſeaſes, as much as can be hoped from it; Oyl of *Tartar*, being Volatile and Fat, with its proper Alcaly, in a juſt proportion, is made *Sope*.

Evil departs not from the unthankful Man's houſe.

When the Reformer heretofore had been informed by me, by word of Mouth, of this example of *Tartar*, he preſently boils the Alcaly of Vipers, with Oyl of *Tartar*, being of a diverſe Nature, after a Rural faſhion, and with little heed, which, by Coction in a Glaſs of a long neck, with the Alcaly, acquired the conſiſtence of Sope, yet he blames me for my Friendly Information, in a very long Letter, Saying; *The Oyl of Tartar, you adviſed me to pour on, became like very Pitch, and that ſo thick, when it was cold, that a man may cut it; So that I perceive you deceived me. 'Tis true, I heard from your mouth before, that the preparation of this Salt, would give great light to Chymiſtry*, &c. This great Naturaliſt had not ſo much Salt (as we ſay) in his Brains (though he writes and ſcribbles of Salt) as to enquire into the neceſſary cauſe of this Inſpiſſation, but preſently calls that, which he underſtands not, *A Cheat, and an Impoſture*. But like, as he hath obſerved the cauſe of this Inſpiſſation, which is known even to the Vulgar, and to all thoſe who make Sope; even ſo with the ſame heed he hath obſerved the Things, which he Reforms.

Ex. 87.

Hearken therefore to me, All Oyl, and alſo all Pingue-Does or Fatts, have an Occult Acid, on which the Alcalyes act, and conſume it, otherwiſe Sope could never be made: for the diſtilled Oyl of Olives, doth corrode and diſſolve Silver inſenſibly, when it is caſt on it but a ſhort ſpace, which would not be, unleſs Acidity were in it; the remainder being thick, better preſerves Iron from Ruſt, in as much as the aforeſaid Acid hath been taken away by Diſtillation, and is turned, by a ſtrong fire, into a Coal Alcalized, which is plain to the Eye, by the affuſion of any Acid Spirit. This is the reaſon, why the Chief Armourers and Overſeers of the *Arſenal* of this Famous City, before they Oyl their Armour, cauſe the Oyl to Evaporate at a gentle Fire, almoſt to the half.

So

So the common People in ſharp Pains (proceeding ordinarily from Acidity) deſire to be annointed with the Oyl which burns before Images, and That aſſwages their Pain. This Relief, the Superſtitious People of *Greece*, attribute to the Image, before which the Lamp burns; But the true cauſe is, the Spiſſitude in the Lamp, loſes its more ſubtil Acid part by the flame, and ſo being deſtitute thereof, it grows impatient, and deſires to be Saturated with a new Acid, and finding That in the grieved part, it draws it out, and unites it, to it ſelf; and ſo the Grief either wholly ceaſes, or is at leaſt mitigated and abated.

Thick Oyl of Olives reſembles *Alcaly*.

The Vulgar believe, that Old Oyl is as good as Balſam, becauſe the Oyl of a Hundred years old in the Caſtle of *Breſchia*, eaſes many from their pains, ariſing from Acidity; in which Oyl, by reaſon of its antiquity, the Alcaly hath in part maſtered the Acidity, hence at laſt it grows very muſty; So Venerable Antiquity preſcribes Old Oyl in Compoſitions for External uſe.

Why old Oyl grows mouldy.

For the ſame reaſon, *rotten* Apples do cool, more than *boiled* ones; which therefore we call, *Anodynes*.

Rotten Apples.

Freſh Butter hath more Alcaly than Acid, and therefore it cooles more than Oyl; Hence *Schola Salerni*, *Lenit, & humectat, ſolvit ſine Febre, butyrum.*

Butter mollifies, moiſtens, and diſſolves, yet without a Feavor; for this cauſe, it is not coagulated in the Milk, unleſs the Milk be ſowred before, and if in making or Churning of Butter, fixed Alcaly be caſt in, which conſumes the Acid, the Butter will never *come*; for the Acid muſt coagulate the Alcaly.

Butter.

So alſo Alcalized Salts do eaſily flow, and are diſſolved in the Air, but as ſoon as Acid is poured on them, to overcome the Alcaly, they harden, and are coagulated.

Sulphur, in its Fat hath an hidden *Acidity*, and is moſt readily diſſolved, not only in Oyl, but alſo in Alcaly, but never in that which is manifeſtly *Acid*, though it be moſt powerful; but if it be fired under a Glaſs Bell, then its hidden *Acidity* is turned to Smoak, which is compacted into a moſt Acid Juice, and the Alcaly which erſt did friendly embrace the *Sulphur*, now is deſtroyed by It,

Sulphur is *Acid*.

and a new production is made, different from the former.

But Sulphur is praiſed by *Dioſcorides*, in the Diſeaſes of the *Lungs*; though ſome ſay, it is the *Anima* thereof, underſtand, when it is evacuated by an Hippocratiſt, and fixed into inſipid and milky Earth, then it becomes impatient of Innanition, and again deſires to be ſatiated with its like: Wherefore it greedily attracts, and abſorbes the putrefactive Acidity of the *Lungs*, which is firmly believ'd to deſcend from the Head, but without this preparation, it is found altogether unprofitable, for thoſe Diſeaſes, as the Enquirers after Truth, by Nauſeating experience, do daily find. This earth is then called by the Skilful, **Lac Sulphuris*, and that worthily, for it performes many things, which *Crollius* hath mentioned under its Title.

* Milk of Sulphur.

Moreover, Diſtill alſo Vinegar (in which I have ſhewed, that there is Fat Oyl, and *Aqua Ardens*) drive the dry Fæces out of the Retort, and there will come forth *Acid*, and Pingueous Oyl, reduce the Coal left into Aſhes, from Theſe, Elicite the *Alcaly*, by common Water, which again imbibes, and abſorbs its own Vinegar: out of the Phlegm is made *Aqua Ardens*.

From the *Alcaly*, and the *Acid*, you ſhall have regenerated *Tartar*, ſo there are *All, in all things* (*i. e.*) you ſhall every where find the *Acid* and the *Alcaly*.

All things in all things.

Camphire (about which, it is ſtrongly diſputed, whether it be hot or cold:) is a Volatile *Alcaly*, furniſhed and ſaturated by Nature, with its proper Fatneſs, as I have ſhewed, like things may be done by Art; for it imbibes into it ſelf the ſtinking and corroding Acidity of *Aqua Fortis*, which Suffocates by its very Smell, and with it, makes a Mock-ſhew and reſemblance of Oyl; but not with a benign, ſweet, and grateful *Acid* (as, Vinegar, and other Acid Juices) which is to be marked: After the ſame manner, *Camphire*, given at Mouth, doth preſently attract to it ſelf that Malign, inwardly Venemous, Stinking, Corroding, and Suffocating *Acidity*, which in Acute Diſeaſes, doth range through all the Veins, and torments the Patients without intermiſſion; whereby the Vital Spirit is made

The often ſmell of *Aqua Fortis* breeds an *Atrophy*, with moſt bitter pains. See *Helmont.* c. 9. f. 71.

made purer, chearfuller, and acquires ſtrength, which *Avicen*, amongſt Practicioners, firſt obſerved; whence he rightly commends, and calls it, *A Treacle againſt hot Poyſons*; *The Vital Spirit*, ſays he, *acquires Subtilty, and exceeding Sprightlineſs, and Vivacity, from It, and therefore it chears and comforts*, even in ſpight of that Vulgar Proverb, *Caſtrat per Nares, Camphora odore Mares.* *Camphire.*

(i. e.) *Smell'd Champhires doſe,*
Caſtrates by th' Noſe.

I add this, in regard all that I have known, employed about purifying of It, from its Dreggs, by Sublimation, both at *Venice*, and *Amſterdam* (they are called *Reſinatores*) whoſe houſes, ſmelled of nothing, but *Camphire*, are moſt Salacious, Procreative, and full of Children, as, if you will not believe their own Confeſſion, their numerous Off-ſprings may evince. If I ſpeak not the Truth, let me be aſhamed.

Camphire ſo diſſolved in *Aqua Fortis*, and precipitated, or rather reduced, with plain Simple water, is made Soap, wherewith Womans hands being annointed, and afterwards waſhed with water, it takes away that roughneſs which exaſperates the Skin, and makes them ſoft, and as white as Milk; a ſingular Ornament for the Female Sex; for our * Maſter teaches; *That the care of the Sound and Healthy is to be alſo undertaken, for Comelineſs and Beauties ſake.* * In his book of Precepts.

As the *Alcaly* of *Camphire* drinks up nothing, but *Acidity* alone; So alſo doth *Antimony*, being deſtitute of its proper and innate Acidity, which conſiſts in a ſubtil venemous Exhalation, not at all weighty, as its Glaſs or Powder, called *Mercurius Vitæ*, doth ſhew, out of which with Acid Wine (its like, but not, with Sweet) is Extracted a Poyſon, which the Stomach abhors, and therethere this Wine taken at Mouth, with great violence is rejected from and by the Vital parts, both by Vomit and Seige; and by accident, it ſometimes Cures the Diſeaſes of the firſt Region. Hence *Helmont*, *As long as Antimony provokes Vomit, 'tis no remedy for an Honeſt Man.* *Antimony.* *De Febrib. c. 15. 6.*

But when, That Poyſon is expelled out of the Antimony either

either by the flame of the fire, or by kindled Nitre (of which, I have ſpoken in its place) then the Alcaly of *Antimony* is again Saturated with the aforeſaid *Acid* Spirits, which yet, coming from flame or Nitre, are not proper to *Antimony*; So that in a few days ſpace, out of the Air, It draws an Aliment, like it ſelf, as I have ſhewed in a Flint, which, out of the Air, extracts a nouriſhment like *it ſelf*, not like the life of a *Dog*; So, That, which erſt did gently provoke Sweat and Urine, now, like the very Glaſs of *Antimony* it ſelf, moves Vomit; Wherefore the flame, as alſo the Acidity of the Nitre, as they are not Poyſons, ſo they are not proper to the *Antimony*, now diſpoiled and evacuated; and ſo the Antimony, being reduced to *Alcaly*, and rob'd of all taſte or ſapor, which they call *Diaphoretick*, if it finds any Venemous thing in Man's body, it attracts it, and is Saturated by it (*For Nature rejoyces in its like Nature*) retaining it, and rejoycing therein, more then if it wandered up and down in Man's body: Wherefore that empty and Diaphoretick *Antimony*, profits nothing in Diſeaſes, unleſs when They are accompanyed with ſome Acid Poyſon, either occult, or maniſeſt, as in the Plague, burning Feavors, Petechriales, or Spotted ones; and in diverſe inward Ulcers, in what place ſoever they be; the venemous exhalations of which, being abſorbed by the Antimony, then the Pores do open of their own accord, and the Antimony becomes *Diaphoretick*, otherwiſe not: Hence *Baſilius* ſays, *That this Powder is of great force, to Cure many old Ulcerated Diſeaſes*, &c. (*i. e.*) whoſe Acidities are putrefying and eſcarotick or corroding, for *Theſe*, this Powder imbibes and deſtroys, and hereby, as I have ſaid, the contraction of the Pores is enlarged and relaxed (this action, the Vulgar call, *Exſiccation*, for which cauſe it is alſo an Ingredient into that Plaiſter, which *Paracelſus* calls, by a barbarous Name, *Oppodeldock*. But what this Abſumption, Imbibition, Precipitation, or Exſiccation are? and how they are effected? I ſhall again Ocularly demonſtrate anon, when I ſpeak of the properties of Iron) and though Pearls, Corals, and other Cordials, do alſo abſume the *Acidities*, ariſing about the Heart; yet *Theſe* are not putrefactive, neither joyned

The Mines of *Vitriol* in *Carinthia*, being emptied, in a few years, in the open Air, are filled again by it.
So are alſo the empty Mines of Salt-peter, at *Padua*, whence it is called, *Anima Mundi*, or *Spiritus Multiformis*, by the Wiſe.
For this reaſon *Baſilius* praiſes *Alcaly* of *Arſenick* as the Treaſure of Health; yet I would have none but the Learned to deal in it.

In Kepit. Antiquiſs. Lap. f. 80. in my Edition.

joyned with an hidden Venom; So that, it is one kind of *Acid*, which, emptyed and Alcalized, *Antimony* doth imbibe: another kind, that Pearls Attract, in the Palpitration of the Heart: another, which Crabbs Eyes draw forth in Wounds and Bruises: another, attracted by Goats-blood, in Pleurisies: another, by Iron, in Obstructions and Loosnesses: another by the Volatile *Alcalyes* of Vegetables in Hecticks; another by thd *Bezoar* Stone, when rich men fall into a Swoon (I say rich men, for unless the proportion of this precious Stone, which is very dear, be correspondent to that Acidity, which is hateful to Nature, it is given in vain. Hence *Crato* says, he never observed any good from it, though it were frequently given; which I perswade my self to be true, especially it being prescribed by Grains, as Books perswade: The skilfullest Practicioners of this City, have observed this Defect, as well as *Crato*, who therefore perscribe Western *Bezoar*, not that it is better than the Eastern, but because it is cheaper, and therefore it is given in a greater Dose. For it is commonly believed, to provoke and expel Sweat, which effect yet it doth not produce, unless it hath first consumed the Morbous Acidity (as * *Hercules* of *Saxony*, a Physician of note, hath observed) for this Stone is considered by them (as many other Simples) to act upon the Body, as a Wedg driven by a Beetle, not remembring, that, the Extraneous Sapor, being consumed by the Stone (or its like) the contraction of the Pores is enlarged, and then the whole Body transpires of it self, as old *Hippocrates* teaches: the truth of whose doctrine, is confirmed by a fly falling into the Eye, whose lids are presently with great violence contracted, not that the Fly contracts them, but the Sense abhors a Forreign Inmate; but as soon as the Fly is taken out, the Eye-lids are again gently relaxed.) I say, it is one sort of Acidity, which *Paracelsus* his *Libium* doth consume, in the Dropsy; another, which the Spiritual Salt of *Tartar* destroyes, in Hypocondriacal Melancholy, and all other Diseases of the Spleen: another, that *Ostiocolla* doth waste, in the rupture of Bones; another, that Corals, with their specifick Alcaly, destroy and absorb in the *Gonorrhaa*, &c. But the aforesaid Simples, do not imbibe

Commonly it is called by the general name of *Heat*.

The weight of a drachm was given to King *Edward*, see *Monardus*.

* *Chap.* of Pestilent *Feavors*.

imbibe (nor ſo much as enter into) the proper, innate, and manifeſt Acidity of the Stomach (as I have ſhewed) whereby it Concocts, and changes the food into an Acid Vital Juice, which is to be admired. Hence it appears, every Acidity, or *Aura* (call it as you pleaſe) expects, and willingly entertains its convenient Compar and Fellow (as I have erſt ſhewed in the Earth of *Carinthia*, evacuated of *Vitriol*) wherewith it delights to be altered, abſorbed, and tranſmuted, and one diſturbs not the courſe or province of another: Hence Man hath obtained the Name of the *Microcoſm*, and * *Hermes* ſays, *The things which are in the Superior, are alſo in Inferior Bodies.* Theſe are the foundations of Phyſick, *according to the nature of Man; as its inventors firſt found it out, and judg'd it, an Art worthy to be aſcribed to God, and it hath been ſo accounted, as the* * Old Man teaches; for, ſays he, in the cited place, *It is not Siccity, Humidity, Heat, nor Cold,* &c. *but Sapors*, which he there reckons up, *Theſe*, my * *Hippocrates* ſhews, to be in the Cavities and Ventricles, ſaying, *That Man's Body hath many Ventricles (or Sapors) as they can witneſs, who are ſolicitous to know them* (he means only Chymical Philoſophers, for by and by, he ſubjoyns) *of all the aforeſaid things, there is none viſible and conſpicuous to the Eye: Wherefore they are called obſcure by me, not that they remain always ſo; and do ever fly from our underſtanding, but, as much as is poſſible*, they may be underſtood and known. *For it is poſſible* (to Chymical Hippocratical Philoſopher) *as far as the Nature of the Sick, doth aſſiſt in the conſideration, and as far as the natures of the Enquirers, are fit for that purpoſe: For with much labour, and no ſmall ſpace of time, they are known and exhibited to the Eye. For thoſe things which eſcape our bodily Eyes, are comprehended by our Followers, by the eyes of their minds*, ſo far he.

I have ſhewed before by *Alcaly*, that the Seeds of things in the *Macrocoſm*, are *Acid*, ſo in the *Microcoſm*, as well in the Healthy, as Sick. Nature ſtudiouſly Obſerves the ſame conſent as this daily and common Praxis doth declare.

* *In Tabula.*

* *De Vetr. Medicin.*

* *Lib. de Arte.*

Many of theſe things, by the Authority of *Hippocrates*, I have clearly demonſtrated to the Eye, as much as the brevity of a *Compendium* will allow, but not to the Intent, that every Hippocratiſt ſhould imprudently practiſe or proſtitute this Doctrine to, and before the Unskilful; Our *Maſter* vehemently forbids *That*, ſaying, *It ſeems beſt to*

De Priſca Medic.

me,

me, that they who undertake to ſpeak of this Art, ſhould diſcourſe only of thoſe things, which are known to the Vulgar, not enquiring into any other, but the Diſeaſes, to which they are uſually Obnoxious: which is as much as to ſay, if thou record other things, beſides the four Excrementitious Humours, to be the cauſe of Diſeaſes, and does not pretend to expel them with their Concomitants and Attendants, the ſame way that others do; thou ſhalt be called a Fugitive, an Emperick, and a Paracelſian: Since therefore, our *Maſter* was afraid of Plebeian ignorants, an Hippocratiſt ſhould often ruminate on that ſaying of the *Comedian*, *Quod ſcis, neſcis.*

Speak, as the Many, Think as the Few. *Ariſt.* 1. *Top.*

To make no further Digreſſion, Out of what hath been ſpoken, we may conclude, how meet it is, that all Alcalyes, without Acids, ſhould be empty and inanous bodies; for fixed Alcaly, ſaturated with fixed Acid, is made Petrous, as I have ſhewed in Lime; but when It undergoes a melting heat, then they paſs into Glaſs.

Alcaly is a *Vacuum* in Nature.

The ſame fixed Alcaly, boiled to maturity with an Occult Pingueous Acid, *the Humid-way*, is made Sope.

So fixed Alcaly, mixed with Acid Spirit of Salt, is made Common Salt, having all the properties thereof: So alſo fixed Alcaly, with the Acid of *Vitriol*, is made Vitriol, which is called *Tartarum Vitriolatum*; and though Writers affirm, that the Acid of *Sulphur*, *per Campanam*, doth not differ, from the Acid of *Vitriol*, yet it is not true; but, as all *Acids* do retain and preſerve the properties of their ſeed, even unto the very Elements, as I have ſhewed before in Wine, ſo doth this Acid Liquor; for when it corrodes a natural Body, as Sand (for Example) having not yet undergone the fire, then out of It, is ſublimated natural *Sulphur*: *Wherefore nothing in the world dies, but all things are tranſmigrated and changed*, as * *Triſmegiſtus* rightly determines: and *Lucretius* alſo, *All things into their own bodies are diſſolved, nothing by Nature is to naught reſolved.* Fixed *Alcaly*, with the Acid Spirit of *Nitre*, is turned into Frigid Nitre, conceiving Flame, and is a Remedy for the *Quinzey*.

No body at all doth periſh, nor is made That, which it was not before. *Hipp. L.* 1. *de Diæt.*

* In *Pimandr.* *L.* 2.

The ſame Alcaly, with the Acid Spirit of Wine, is made *Tartar of Wine*, as I have above largely ſhewn.

After

After this ſort, ſays my Maſter *Hippocrates*, doth Nature alſo proceed, which turnes the Aliments, repleniſhed with a Volatile Alcaly, with and by the Acidity of the Stomach, firſt of all into Chyle manifeſtly Acid, and in the ſubſequent Ventricles, the Alcaly is coagulated, according to the property of the Occult Acid, which the Cavities contain within themſelves; So the Alcaly of the Excrements of the Belly, though it be an hundred times rectified, is troubled of its own accord, as I have ſhewed in its place: An Odorous ſmell is inſeparable from the Alcaly of Urine; the Alcaly of the Sweat of a ſound Man, doth not ſtink; ſo there is a different coagulation of the Stone, as I have ſhewn in its diſſolution and concretion. That *Acid* is different, which hardens the Alcaly in the Bones; another, in the Blood; another, in the Veins; another, in the Hair; and another muſt neceſſarily be in the Nails (Reaſon it ſelf dictates ſo much) for otherwiſe every thing would be generated of every thing; So alſo Sope made with Oyl, differs from That made with *Axungia*, and *this* again from *that*, made with Tallow or Suet. *All the Muſcles* (ſays * *Hippocrates*) *have their proper Ventricle*; intimating, that every Specifick Coagulation, doth alſo require a Specifick Coagulator, which though he be Occult, yet, by Mechanical neceſſity, he muſt needs be Acid; as I have evidenced in Oyl, Suet, Milk, *&c.* otherwiſe, nothing at all in the Univerſe would be Coagulated; *For the things, which have been ſpoken* (ſays my Doctor) *none of them can be ſeen with the Eye* (*i. e.*) none can underſtand my Writings, unleſs he be verſed in this Chymical, and Salt-fuſory Art.

The Ferments of the place which they call Mumail.

* 1. *de Artt.*

De Artt.

Wherefore *Hippocrates* found out thoſe things, which, by a grateful conſent, are ſubject to the Empire of Art and Nature; On this Foot he places the unmovable Foundations of Learning, and from theſe he hath deduced all Mechanical Progreſſes, and Explications of Cauſes, ſo firmly, that if all Paper Books, with their Authors, were loſt; yet by this Method, out of the Great Book of Nature, they may be all again retrieved.

The book of Nature is to be read, but Paper ones, are not to be rejected.

Hence it appears, how many Fables have been aſcribed to this worthy Man, which he never ſo much as dream'd of,

of, yea many things, publiſhed under his name, ſuit not with his Profound Wiſdom, ſo that if he were alive again, he would be aſhamed to own them.

The permixture and alteration, which I have demonſtrated in fixed *Alcalyes* with *Acids*, the ſame alſo * my *Hippocrates* would have to be underſtood, of the Volatile Alcalyes of Animals, for, the Volatile Alcaly of any Animal whatſoever, being ſaturated with the Acid Spirit of *Vitriol*, aſſumes the nature of *Vitriol*; but, not having the Colcothar of Iron, it is precipitated, by juice of Galls, into a bottom of a Purple Colour, like to White *Vitriol*, of which above. *L. 1. of Diet.*

Out of what hath been ſpoken, 'tis as clear as Noonday, that the Spirit, is the Vehicle and lodging place of the Soul, and the Bond joyning Soul and Body; which I ſhall alſo ſhew by the following Experiments.

For the ſame Volatile Alcaly, of what Animal ſoever, with Spirit of Nitre, is made natural Nitre, conceiving Flame, and is melted in the fire, like ordinary Nitre; The ſame Alcaly, I ſay, with Vinegar, is made *Tartar*, which is wholly Diſtilled into a Salt liquor, as I have ſhewed in *Mindererus* his Water; the ſame may be ſaid of other Acid Juices; for as fixed Alcalyes are vacuous and empty bodies, ſo are alſo the Volatile ones of all Animals, whoſe preparations the Reformer indeed teaches, which yet is very inane and empty, as all Alcalyes are. Hence my *Hippocrates*, moved to a ſmiling laughter, pleaſantly ſays, *They know not what they do, but they obey their deſtined fate.* Wherefore the Alcaly of *Vipers*, being a vacuous and empty body, is ſaturated by the Reformer (as empty) with great labour and coſt, with the Acid Spirit of Salt, and what elſe, I pray, but Common Salt, can iſſue from it? Behold the Cheat and Impoſture, which the Reformer hath at laſt *found out*, *with ſo much labour*, of which triumphing before the victory, he thus ſcribbles, *Whoſoever thou art, never think there is any other way of Fixing*; having ſpoken this, by and by he recants, ſaying (with a low voice) *If yet there be any Man, who hath greater Experience in theſe Operations, I give him occaſion, for the Publick good, that, what he hath Experimented herein, he would not ſuffer* *L. 1. of Diet.* *Pharm. f. 486.* *Pharm. f. 486.*

to die with him. Alas poor Man! why not? but go too, Let us comply with his desires, he hath made a fair Oration, and no doubt deserves a Statue from the Common-Wealth of Physick, for having so politely distinguished the Acid from the Salt, for the benefit of Apothecaries.

Append. in Animadv. fol. 75.

CHAP. XXII.

A Childish Opinion Discovered.

In Append. f. 52.

I Will briefly now run over the *Acids*, which the Reformer teaches, as contrary to Salts, which Doctrine yet, with many others, I find to be false, and full of Ignorance; as shall be demonstrated by Fire, keeping to the Terms usually received (for *Fire* is here the publick Professor and just Judge; *Logick* hath no such way of distinguishing, for *that* only handles true Sciences already found out, [illegible] propounds Methodically, and clearly and profitably to treat of what is to be known, in every knowable thing. But I have before distinguished the Tastes or Sapors of Salts, as much as was necessary for the understanding of this present Compendium. Let there be made a Powder of *Nitre*, and Common Salt, *Ana*, four Ounces, and two Ounces of *Allum*, to which add Simple Water, as much as is sufficient for the solution of the Salts (which act not, undissolved) and you will obtain a Salt Liquor, to which add two Drachms at least, of Leaf-Gold, mingle the Gold with the Salts, and boil them in a glazen pot, to *Siccity*: towards the end, encrease the fire, till it affords a smell like That of *Aqua Fortis*, so the saltness of the mixture erodes the Gold: Dissolve the white Mass in a pot, with Common Water, let the Solution rest in the Glass Vessel, till the Fæces of the Salt do subside: when it is clear, pour it out by inclination; to this clear solution, instil by drops, some fixed resolved Alcaly *Ex. Gra.* Liquor of *Tartar*, which presently absorbs the

Fire, both Internal and External, Explains the Book of Nature, as the ordinary professor of the Creator.

The Calcining of Gold, the dry way.

the more subtil Acid Spirits; and the Gold presently falls of a Purple colour: In this Operation, the Salt hinders not the *Acid* Spirits, as the Reformer teaches, but the Alcaly of *Tartar*, consuming the Acids, destroys the *Compositum*.

The same way, but with great force, distilled water of Nitre and Allum, in which Common Salt hath been dissolved, dissolves Gold, for if the Salt were not dissolved in water, it would not corrode the Gold: Wherefore Salt doth not destroy the Acid *Aqua Fortis*, neither in the *dry*, nor *moist* way, but adds Vigor to it, like to *Sal Armoniack*; Hence *Basilius*, *What is found in the Eagle, is also to be met with in me.* Calcining of Gold the moist way.

Hence it appears, that Gold is not dissolved, but by Salts, but why the Acid Spirit of Salt doth dissolve It, I have elsewhere shewed, *viz.* by corroding the Spirits, it returns to That, which it natively and originally was, *viz.* into Salt.

CHAP. XXIII.

Obscure things, made manifest.

I Will shew another Experiment, very pleasing to the Eye, manifesting, that Salts are not contrary to Acids.

Take three pound of dryed *Vitriol*, two pound of *Nitre*, six ounces of the Flowers of Common *Sulphur*, and five pound and a half of Common Salt, and Powder of Bricks, as much as is sufficient (least the Salts should be melted with the *Sulphur*:) Let there be six pound of this last powder, mingle the small powders exactly, and distil the water, at least out of Sand, put Gold Money into this water, without rectification premised, and in a few hours hours in a warm place, you will see the water tinged with a Golden colour (by occasion of this Tincture, Tincture of Gold.

ſtance, It comes to my mind, that not without great labour, by the help of Fire, and much Diligence, a Volatile Alcaly (of which I have elſewhere ſpoken) aſcended of a grateful ſmell, ſo rare and light, that it can ſcarce be perceived by the touch, ſometimes of a grey, ſometimes of a white colour, of a Salt taſte, biting the Tongue, and ſo ſubtil, that, without the irritation by fire, in an open Veſſel, of its own accord, it evaporates to Air; whereas of it ſelf it remains conſtant in fire: I ſay, by the property of this Alcaly, Gold, Silver, Quick-ſilver, Chryſtal, *&c.* are made truly potable, ſo that, it is not only impoſſible, they ſhould return to their bodies; but moreover they are ſo freed from the bonds of Coagulation, that we may freely dally with them, *&c.* But theſe, and the like, being not proper for this place, I willingly paſs them over.) Pour out the aforeſaid water, and ſuper-adde other, and again diſtil it in a hot place, till the water be ſufficiently tinged; mix and ſhake the tinged waters together in another Phyal, and into that water put plates of Silver, firſt cuppelled, then the water tinged with a Golden colour, preſently grows Black, and in a few moments, all the Silver is inviſibly diſſolved, and all falls into a black Calx, which the Skilful in the Art, without contradiction, call *Gold*: But obſerve, that water not tinged by Gold, diſſolves not, no nor any way affects the Silver.

* Of the properties of Planets.

Hence * *Baſilius de Argento, I have devoted my Soul, my Spirit, and my Body to my King.*

Waſh the Gold-money, and you will find it ſomething paler, but to have loſt little or nothing of its weight: This Experiment is worthy of conſideration, but when the aforeſaid powders are diſtilled with a naked Fire, and open, more of the duſt of Bricks being added, then it draws forth no Tincture, but wholly diſſolves all the Gold: I ſay, this Experiment (though it ſeems uſeleſs, yet is pleaſant, and of great conſequence) doth not ſucceed without Salt: So that Salt doth not hurt theſe Acid Spirits.

Sulphur of *Antimony.*

So alſo ſimple *Aqua Fortis* of Nitre and Allum, or Vitriol, corrodes not, nor diſſolves Crude *Antimony*; but add

add to this water, ſo much *fuſed* Salt (*i. e.*) clean and finely powdered, as it can diſſolve, Superfuſe This water on the *Antimony*, only groſly pounded, like the grains of *Millium*, and preſently, with a gentle heat, it acts on the *Antimony*, and corrodes the *Regulus* of it; on which preſently pour cold water, and you will ſee the *Sulphur* ſeperated, which ſwims a-top of the water, like Pitch.

The *Minera* of *Antimony* from the *Rawian* Mountains, with red ſpots or Veins, ſo diſſolved, melts Gold.

But mark, that at one operation, you ſhould diſſolve not above two drachms, or there-abouts, for in a greater quantity, the *Sulphur* is alſo corroded by the water, and turns to Fæces. Dulcify this *Sulphur* with cold water, and it will look like the Common, only a little greener. This ſeparation alſo ſucceeds not without Salt; ſo that *Acids* are not hurt by It.

Of this *Sulphur*, adding two ſimples, you may make an Oyl, with which, if you annoint the Back-bone, Hand-wriſts, ſoles of the Feet, one hour before the fit, you may cure all intermitting *Tertian* Agues and Feavors.

A *Febrifuge* Oyl.

This *Sulphur* is the Baſis of the Artificial water, wherein if Silver be diſſolved, it precipitates the greateſt part of it, into a black Calx, which *Aqua Fortis* afterwards will not touch.

If Chryſtal be cœmented with the ſame *Sulphur*, as alſo Crude *Antimony*, marked with red Spots, mix'd with a little Orpiment and powdered, it acquires the colour of a Ruby, but take heed of the wind, for that will make it chink, and crack, or break.

Chriſtal tinged like Ruby.

This is that *Sulphur* of *Antimony*, which * *Helmont* adviſes us, to extract, ſcarce different from the Common in ſight, only it is a little more greeniſh; how much this *Sulphur* avails in the Dropſy called *Tympanitis*, They, who having uſed it, know, as well as I: yea, I firmly maintain, that *Rulandus* his Balſam is elicited from this *Sulphur*. *Helmont* goes on, make, ſays he, *Cinnabar*, I know many do much diſquiet themſelves with this Operation, but I will now openly and clearly diſcover it. Melt this *Sulphur* of *Antimony* in an Iron ſpoon, with a gentle Fire, when the Sulphur is melted, of which let there

* *Tract. de Verbis, Herbis, & Lapidibus.* Remedy of Tympanitis.

* *Ruland's* Balſam of *Sulphur*,

there be *E. C.* an ounce and a half, add about six drachms of *Mercury*, a little over, or under, 'tis no great matter (for the *Sulphur* receives as much as it can mortify) mix them continually with an Iron Spatule, till they be cooled, reduce the Mass into Powder (which many fire or kindle with live coals, that the superfluous *Sulphur* may deflagrate) put this powder into a Retort of a large neck, (I say large, lest it be stopped by the *Cinnabar* ascending) and by degrees Distil it from Sand; then, that which is superfluous, either of the *Mercury* or *Sulphur*, runs down through the neck of the Retort; which gather up, then encrease the fire, that the Cupple may be hot, and the *Cinnabar* will be elevated; when all is cold break the Retort, reduce the *Cinnabar* to Powder, which you must seven times more sublimate *per se*, in a fit Glass Vessel, or Retort, and you shall have your intent. By the same way, Common *Cinnabar* is also made, but without repetition of the Sublimation.

Cinnabar of *Antimony*.

Common *Cinnabar*.

Helmont here purposely concealed, that it must not be *Common Mercury*, but *That* taken from the very body of *Antimony*. To what purpose is this superfluous industry (*Let me whisper this word to Our Chymists*) when as the same *Cinnabar* is Sublimated, after Distillation of Butter of *Antimony*, unless *Mercury of Antimony*, be here required.

There must be but one Rector.

Errors sought after, are found out by Operation, not else.

CHAP. XXIV.

Nocuments are Documents.

Hitherto in those Operations, which are all performed by Acids and Salts, it no where appears, that they destroy one another; now let us proceed to the Rhapsody of the Reformer, which he proudly calls *Mantissa Hermetica*, as we are told in his own Book, *Where the true preparation of* Mercury *Sublimate and Corrosive is*, (as he says) *presented to us*. Good Wine needs no Bush, as the Poet says, why he adds, *True preparation* to the Title,

The Reformer is ignorant what *Hermes* thought of these Trifles.

Mantis. f. 801.

Title, I see not. I suspect, that after his accustomed manner, he hath a mind to cheat us with fair words; but let us do the best we can to prevent it.

Mercury (says he) *is rightly sublimated with Salt and Vitriol* ('tis a wonder he did not fear, lest the Salt should destroy the Acidness of the *Vitriol*) but because he found it so Writ by others, at length he adds, *That the Vitriol must be warily Calcined, lest it be deprived of its Acid Spirit.* He thinks he hath advised some great matter here, as also by telling us, *That the Sublimation must be twice, or thrice repeated, with new powders of Salt and Vitriol.* But why, and to what purpose, this repeated Sublimation with new Powders? for *Mercury*, being once saturated with the Acid Spirits, what needs any Reiteration of the labour? especially if it be true (as it is most true, in Nature) *That all things are governed by certain Numbers, Weights, and Measures, according to that of the Poet.*

Est Modus in rebus, sunt certi denique fines,
Quos ultra citraq; nequit consistere rectum.

(i. e.) *A mean, and certain Limits, all things bound,*
Beyond, or this side, which, the right's not found.

So that the nature of *Mercury*, once saturated with Acid Spirits, hath absorbed and imbibed, as much as it can bear, and as much as it wants, from its first Sublimation, and though it be re-sublimated afterwards, an hundred times, either by it self, or with new powders, yet it still remains the same Sublimated *Mercury*: So that, to reiterate the labour, is to make havock of the Powders, and to lose time.

This is that, which the wise Man says in the Proverbs, *False Weights and deceitful Ballances, are an abomination to the Lord.* *Chap. 20. v. 10.*

I know the way of Sublimating *Mercury*, is coveted by many, because they fear, *That* which is Sold up and down, is mix'd with *Arsenick*, which, as a dangerous Drugg, ought not to be added to *Mercury* in its Subli-

Sublimation, by reaſon of ſubtil Poyſon, which it breaths forth in Sublimating, and choaks the Operators: I can ſhew, that 'tis a ſubtil Poyſon, by the danger I have experimently found in it, my ſelf.

Arſenick. For heretofore, when (by the perſwaſion of *Johannes Agricola*) I eſſay'd to ſublimate *Arſenick* ſo often, that at length it might remain fixed in the bottom of the Veſſel, for at that time (out of my eager deſire after Knowledge) I feared neither Smoaks, Vapours, nor any other danger: After many Sublimations, when I opened the Veſſel, I ſuck'd in a breath ſo ſweet, ſo grateful and benign to the Palate, that I even admired it, as having never felt the like before; but after half an hour, I perceived my ſtomach to be contracted and to ake, with a convullion of all my Members, I breathed with difficulty, I piſſed Blood, with incredible Heat; ſuddenly after, I was taken with the *Collick*, and wholly cramped for the ſpace of an hour and half; being recovered by Milk and Oyl, I was indifferent well, yet a ſlow *Feavor*, like a *Hectick*, ſtuck by me all the Winter, which I cured by Decoction of Vulnerary Herbs, and eating the tops or buds of Cole-worts and Colly-flowers, boiled tender in Water, and ſeaſoned with juice of Oranges, Oyl, and a little Salt: yea I did ſo covet this meat, that I could ſcarce reſtrain my Appetite, till Supper and Meat-time: and by theſe Remedies, I grew perfectly well.

Geber de Argent. c. 18. and *Baſil. de Propriet.* 7 Metals *De ſove.*

But in ſpight of the danger, there are ſome, who can burn pure Tinn into Powder, which, by no Vulgar Art can be again reduced to Tinn, as other Metals; yet with *Arſenick*, it is made *Scoria*, part of which, by a ſingular Skill, becomes pure Silver. *Sigiſmund Wan*, a Citizen of *Wondſied* in *Voitland*, knew and practiſed this Art of Separation, to his great benefit; for in the year 1464 he built and endowed a Famous Hoſpital there, which, as *Gaſper Bruſchius* relates, is this day to be ſeen with the Epitaph of the Citizen aforeſaid. Now that Silver may be made out of Tinn, with *Arſenick*, * *Clavius* proves in his Apology againſt *Eraſtus*; to whom I refer you. So much for *Arſenick*, for the ſake of the Curious.

Tinn yields Silver.

* 2 *Vol. Theatri Chym.* fol. 39.

I now return to *Mercury*, whence I digreſſed, which is ſublimated in this proportion: Take

Take of *Mercury* or *Quick-silver* 280 pound (ſo much one bundle weighs, as it is brought out of *Hydria* in Sheep-skins) of *Mercury* Sublimated, twenty pound; of Common Salt, and Salt-Peter, *ana* 200 *l.* of the reſerved *Caput Mortuum*, fifty pound; of *Vitriol* Rubified 400 *l.* All theſe muſt be ſeverally reduced to Powder, under a Mill-ſtone which is to grind them, turning round and ſtanding upright.

The mixture is made after this ſort; The Quick *Mercury* and the Sublimate, muſt firſt be mingled with a part of the Common Salt, and of the Salt-petre; and although the Salts be dry, yet, by this Mixture, they become moiſt; ſo the *Mercury*, in being mixed with the ſaid Powders, dies: then add the other part of the Salts, proceeding to mix them with an Iron Inſtrument, till the *Mercury* appear no where, quick: This Mixture is very moiſt, to which if you have a mind to add Rubified *Vitriol* (which is very dry) it conſumes the Humidity in a moment, and they become altogether as hard as ſtone: wherefore inſtead of the aforeſaid Vitriol, you muſt add the *Caput Mortuum*, either reſerved from the firſt Sublimation, or from *Aqua Fortis*, 'tis all one, ſo the Mixture becomes moderately dry, which then, you muſt agitate through a Sieve: afterwards you may conveniently mix the ſifted Powder, with the Rubified *Vitriol*. Thus the Mixture is made, with which, fill ſixteen great Glaſs Veſſels (let the fourth part of them be empty) place them on Stillatories, and you will ſublimate *Mercury* out of the Aſhes (but not with an open fire, as the Reformer dreams) in four little Furnaces, each of which may hold four Veſſels; ſet Limbecks to the Veſſels, at leaſt looſly, with their Receivers: Let the fire be ſlow for twenty four hours, in that time, the Salts will diſſolve the *Mercury*, and in the Operation it ſmells like *Aqua Fortis*, which hurts the *Lungs*, yea it almoſt ſtrangles thoſe that ſuck it in (as the ſmell of the Vault at *Puteoli* near *Naples*, doth, a Dog) after twenty four hours the ſmell ceaſes, and then the *Mercury* begins to be Sublimated (gather up the *Aqua Fortis*, which is fortified by the other Powders, and ſerves for the precipitation of

The common ſublimation of *Mercury*.

Mercury) continue that heat, till you see the *Mercury* seperated at top from its *Caput Mortuum*, in form of a Cake, which commonly happens about the fifth day, if you have not erred in the Operation. When all is cooled, by reason of the great weight of the Sublimate, the Glass Vessels will break of their own accord (you must gather up the pieces by themselves, for they have some Sublimate, which you may scrape off, wherewith, at another time, running *Mercury* may be mortified:) Take heed of the Ashes, lest it falls through the chinks upon the Cakes, which they curiously take off, with both hands, and lay aside (they call them loaves) of which every one, will weigh about Twenty five pound, or thereabouts, according to the capacity of the Vessel, which held more or less of the Mixture; So that of 280 *l.* of the live *Mercury*, and 20 *l.* of the Sublimate, you may gather 380 *l.* of the Sublimate.

Now the live *Mercury*, thus encreaseth in weight, Eighty pound, not from the Acidity of the Rubified Vitriol, as the * Reformer thinks, which he therefore says, *must be warily Calcined*, but only from the Common Salt; which I prove thus.

* The Reformer's Error.

Mercurius Dulcis Sublimated, of a Red Colour.

Let the same *Mercury* be Sublimated, with the same proportion of Nitre and Rubified *Vitriol*, without Common Salt, then the *Mercury* ascends Red, and acquires nothing of weight, or of the Corrosive.

Common *Mercury* precipitated.

So also, if the same *Mercury* be precipitated with *Aqua Fortis* from *Nitre* and *Vitriol*, then it waxes shining Red, and acquires no further weight: The cause is, because the Sulphureous Nitre, elevates the sulphur of Vitriol; which do joyntly act, at least upon their like (*i. e.*) upon the External Sulphur of the *Mercury*, and so it can encrease nothing at all in weight, nor assume a Corrosive Vertue.

CHAP. XXV.

Minerva Treated.

NOw, That, Vulgar *Mercury*, hath a *Sulphur*, external and separable from the essence of *Mercury*, besides the testimonies of *Geber*, and other wise Men, Experience also shews (the surest School-Mistriss, both here, and every where) by this Operation:

1 Part. L 2. Sum. Perfect.

Put clean and pure *Mercury* into a Glass of a plain bottom and very narrow mouth: boil it in Sand, first with a slow and moderate, afterwards, with a stronger fire, to that degree, that *Mercury* may endeavour to ascend; which, if it happen by a simple motion, cause it to subside again. This way, without the addition of any thing, but External fire, it is precipitated shining Red, like That, which was precipitated with *Aqua Fortis*, out of *Vitriol* and *Nitre*; and it neither gets, nor loses in its weight, in as much as the small portion, if its proper *Sulphur* hath mortified and rubified it: as I have shewed in *Aqua Fortis* from (*Sulphureous*) Nitre. For it is the property of *Sulphur*, to rubify *Mercury*, as I have also demonstrated in the preparation of *Cinnabar*; which also gets nothing in weight; which our Chymists must attentively consider, for it is of concernment.

Sulphur rubifies *Mercury*.

Mingle this red Precipitate (either made *per se*, or otherwise, of whatsoever condition) with Common Salt, urge this *Compositum* with a moderate fire, and then it will be elevated into a Sublimate Corrosive: neither doth the Salt here hinder the Acid *Sulphuris*, yea, without Salt, it would never be made Sublimate Corrosive, out of red precipitate, neither would the *Mercury* encrease in its weight. So, That precipitate, which *Crollius* calls *Turbith Minerale*, in as much as it is made with Spirit of *Vitriol* or *Sulphur*, is not red; because little of the *Sulphur* of *Vitriol* is elevated, without *Nitre*, in the Distilla-

tion; but because of the affinity and symbol which it hath in acting, upon the Sulphur of *Mercury*, it grows Yellow, and hath acquired no weight, after the aluminous taste is washed away with hot water.

The strength and Vertues of all the aforesaid Precipitates are equal, they provoke Vomit, corrupt the Gummes, and, taken often, do cause the Execrable *Ptyalism*. Hence *Helmont*, *As long as Vulgar Mercury can be revificated, 'tis no good Man's Remedy.* For as all Medicines, are Poyson in reference to us, and not to the Excrements; assaulting us, rather than Diseases: So also is the Vulgar precipitate of *Mercury*. Hence That of my * *Hippocrates*, *No Physician can promise Health, by prescribing the assuming of Laxatives.*

* Of Feavors, c. 15. 5. 6.

* Of Purging Medicines.

And although many affirm, *That* Mercury *precipitated* per se, *without the addition of Corrosive, doth mightily provoke Sweat, and for that reason cures all Feavors, as well continual, as intermittent, and six or seven* times given, *wholly cures the French-Pox*; yet it is not true, but, as I have said, by reason of its *Sulphur*, though it be diligently handled the common way, yet it remains the same *Mercury* still. And although *Sulphur*, with great ingenuity and Art, be separated from it, yet, not enduring a *Vacuum*, in a small space of time, it regains new, like the former, as our Master teacheth, *A-part, it is sufficient neither for it self, nor any other*: Nay, besides Experience, *Geber* confirms it, and other learned Men. Hence *the Author of the Book called* Aureum Seculum, *Very elegantly; Saturn, his Grand-father, out of meer anger, again changeth* it into what it was before; and therefore this Spirit hath obtained the name of *Multiformous* and of *Mercury*. Those that have passed through *these painful labours*, know this to be true. But when it is regenerated and resuscitated out of Silver, or any other perfect Metal, and also cleansed, as much as is necessary, and, with his requisite, precipitated to a Redness, it becomes a Medicine not to be despised; which provokes neither Stool nor Vomit, unless in an undiscreet *dose*: yet, it is not the *Aurora* of the Philosophers, though, as it were, Rain-bows, Peacocks-tails, with sundry admirable

L. de Diet. f. 50.

I am not ignorant, that *Mercury* is a perfect Metal.

mirable colours, appear in the sides of the Glass, and in the matter it self, after the same sort, as it happens in *Sulphureous* Steel, whiles it is under the hand of the Workman; neither let any Man believe, that this Precipitate is that *Panacaa*, which * *Crollius* saw at *Michael Siendivoius*'s (whose name he expressed in his Preface, with great Letters, here and there, in these words,

Every like is not the same.

* About the midst of his Sixth part.

Apud Magnum aliquem, cui in aternum bene sit, Cum primis egregium Helioc Antharum, borEaLem, *nunc in Christo quiescentem cujuSmodi* IENt.s DenIq; *consuVerunt latitare tempOrum currIcVliS*:) because it is not by the first Universal matter, reduced to its first matter; But what the first matter of the Philosophers is, besides *Hippocrates*, *Ovid* also doth indigitate, *Tempus edax rerum*, (*i. e.*) the first matter in time doth consume, whatsoever is produced in or from it: Hence the Ancients Fabled, that *Saturn* did devour his own Sons, as the Venerable *Pythagoras* doth witness; *All Secrets* (says he) *are in Saturn* (*i. e.*) in the most Ancient and first Matter: Of which enough at this time.

'Tis a point of Art, to read it.

Metamorph. L. 15.

Wherefore, the External *Sulphur* in the *Mercury* is the cause of Vomit and Salivation, and not the Corrosive Spirits, with which it is Precipitated or Sublimated; which the inunction with *Quick-silver* it self proves, which is not perceived by the Taste, but the most Acid Sulphur of *Mercury*, as I have shewed, first pierceth the Skin, after the manner of Acids, *Then it creeps to the Ventricles, or cavities of the Muscles, which in healthy Men are turgid and full of Spirit*, for so they are called by *Hippocrates*; Then the second, or at least, the third day, Those who are anointed, either whole, or sick (for now tis all one, to the *Mercury*) begin to languish; the Tortor abides in the Anointing, until at length, in all the Ventricles it doth disorder, alienate, and destroy the Occult Acid and Alcaly, or the faculties (as my *Hippocrates* speaks) which I have shewed to be, and to operate there, That venemous Acidity of the Sulphur of *Mercury*, absorbs the Alcaly of the Ventricles, and makes its fellow, otherwise Occult, with most strong Poyson, more Acid, and manifest; So one faculty is extinguished, and the Acid, multiplyed

Sulphur of *Mercury*, is Poyson.

L. de Arte.

The *Catholick* Hippocratical Doctrine is every where alike.

tiplyed by Poyſon, goes on in working, and acts Retrograde: and, reſolves, as Cauſticks do, all the Aliment into a putrid Maſh: This, the Vital Vertue or Nature, (call it as you pleaſe) endeavouring to expel by fit paſſages, it partly diſſipates it by Sweats, partly, by its purging faculty, it expels it by Stool, with great gripeings; Whence it appears, why many who have been Cured by Salivation, after a long ſpace of time, Relapſe into their ancient Diſeaſes, 'tis becauſe the Malignant diſpoſition is ſtill left in the Body.

Hippocrates reſolves this Doubt for us.

This Occult, but Venemous Acidity of *Mercury* doth primarily then hurt the Teeth and Gums; for as all *Sulphur* hath an Occult Acid (as I have ſhewed before *per Campanum*) ſo *Mercury* hath an Occult Venemous Sulphur, which doth precipitate and rubify it with a gentle, but conſtant, Fire (like Common *Sulphur*) which, I have demonſtrated above, not only by fire, in an Experiment, but alſo by the authority of *Geber*.

Sulphur of *Mercury* Acid.

Now all Acids, eſpecially Putrefactive ones, do offend the Teeth, and Gums (as the *Scurvey* ſhews) and diſſolve the Nerves: then the Blood ſowres there, and putrefies, becoming more ſtinking than a Jakes, with ſuch a Contagion, that the Lips, by touching it, contract Ulcers, and the Cheeks ulcerate within; and this happens not only from its External Unction, but alſo the live *Mercury*, taken often, in a ſmall quantity, by the mouth, performs the ſame thing, as Experience ſhews, and *Rondeletius* and *Platerus* have alſo obſerved. Of this ſort are the Pills of live *Mercury* called *Barbaroſſa*: The old Verſes of *Matheſius* ſuit herewith;

In *Saxonia.*

Terram Mercurij, producta Metalla Veneno:
Eſſe ferunt, *verum eſt, nil niſi virus, habet.*

Metals produced with Poyſon full, Men ſay,
Are **Mercury's** *Soil, which Venom do diſplay.*

Hence it appears, what we are to think of, that *Sulphur*, which, at this ſeaſon, in the mouths of ſome Noblesſe

bles of this Court (Fear not your Teeth in the caſe) under the credulous pretence of a fine, ſweet, and Vital Steam, or *Aura* gives forth a ſad, filthy, truculent, and ſtinking Smell. In ſuch caſes my *Hippocrates* ſays, with a loud voice, *Unskilfulneſs is an evil Treaſure*, &c. * De Lege.

Hence we may ſee the reaſon, why Gold-guilders, and they which ſuck in the ſteam of *Mercury*, do often in progreſs of time, either tremble, or are cramped in their Joynts; but that I may not be too Prolix, I paſs over theſe things in this place.

Wherefore I have obſerved, That *Mercury* regenerated out of Silver, or other perfect Metals, although boiled a whole year, with a different fire, in the above-named Phyal of a plain bottom, yet it can be precipitated *per ſe*, in no degree; and therefore this regenerated *Mercury*, muſt needs want that external *Sulphur*, as appears by Mechanical neceſſity; in the want of which *Sulphur*, it may move Sweat, and ſweetly perform its Operations, Reaſon, and Experience confirming as much: But by great Judgement it being divided into its eſſential parts, and re-conjoyned with new and perfect *Sulphur*, *Then it becomes the ſubject of all Wonder*: as *H.C. Agrippa* ſays in *his Scale of Unity*, but becauſe it is not my purpoſe now to treat of it, unleſs only as it ſerves for Vulgar uſe in Phyſick, I will keep my ſelf within my bounds. *Mercury* Regenerated, an *Alexipharmacum* for the *French* Diſeaſe. *L.* 2. Of Occult Philoſophy.

It appears then, that neither *Vitriol*, nor *Sulphur*, of what kind ſoever, do add either Corroſive Vertue or weight to *Mercury*; as the Reformer would make us believe, ſaying, *That therefore Vitriol muſt be warily Calcined, leſt the Spirits ſhould periſh.* For *Mercury* in Sublimation wants Them not, but only its Humid *Sulphur*; which, as I have ſaid, is elevated by the Spirit of *Nitre*; and they both conjoyned, do act at leaſt on the external Sulphur of the *Mercury*. But if it be urged with a ſtronger fire, it ariſes into a red Powder, not Corroſive, which *Huſerus* and *Croll us* believed to be the *Arcanum Corallinum* of *Paracelſus*, but they underſtood not his meaning, but were miſtaken in their opinion; but when Common Salt is added to *Vitriol* and *Nitre*, then the *Mercury* is diſſolved deeper, by reaſon of the Salt ſapor, and the Sublimate,

Sublimate, grows white, becomes Corrosive, and encreaseth in Weight. And here also, doth not the Acid acquire strength by the Salt? so far is it from destroying it.

So also the Caustick water distilled from *Vitriol*, or *Allum* and *Sal petre*, which is called *Aqua Fortis*, acts at least about *Sulphur*; and unless the Acid Sulphurous Spirits, are in part washed away, or are put to flight by the fire, they are Coagulated, with the *Mercury*, into an Aluminous body, Astringent, and Corrosive.

Pharm. f. 681. Plaister of Froggs with *Mercury*.

This Corrosive *Mercury*, our Reformer would have to be mixed in the Plaister of Froggs, with the Mercury of *Vigo*; *An Absurd invention*, says he, *that Mercury can be mortified by Spittle*: As if *Johan. de Vigo* knew not the Corroding of *Mercury*, who was the Inventor of that Vulgar Precipitate, from him now called *Vigo's Precipitate*. He, I say, made an Emplaister to mitigate the pains of the Joynts, arising from a Virulent Pox, perswading himself, that *Mercury* was the true Alexipharmick of this Disease, but he mingled the live Mercury with things, easing Pains, and sometimes with good success; wherefore he advised to mortify the Mercury with Spittle and Oyl of *Bayes*, which is done in a moment, and afterwards to mix it with the other Ingredients.

The Vulgar judges of few things by the rule of Truth, but of most things, by Opinion.

This Mortification of *Vigo*, the Reformer laughs at, and perverts that excellent Man's Text and meaning, adding Reproaches and Calumnies to boot; and in stead of quick Mercury, he teaches to add Corrosive, without any Ablution, or encreasing the fire to expel the Spirits; but whilest it is yet a Liquor, he enjoyns Fat and Oyl, to be super-added, as if the Corroding Acid, would die in the Fat.

Hence it appears, that the Reformer of the *Auspurgh* Dispensatory, hath not so much as a spark of distinguishing Judgement. Surgeons, to consume Proud-flesh, mix the Precipitate Mercury of *Vigo*, which is commonly sweet in Taste, with Fats and Oyntments, not that the Corrosive Vertue may be destroyed, but that it may not fall off.

So then, if the precipitate of *Vigo*, being sweet, and insipid

insipid to the Taste, mixed with Oyntment, eats up the flesh, surely This Caustick and corroding one of the Reformer doth exulcerate, and in the place where it ought to asswage Pains, it raiseth new ones.

This is the Artifice, which our Reformer instructs us in, to whom I may well apply that of *Plautus*.

Ibo ad medicum: atq; ibi me Toxico morti dabo.

I will to the Physician hye,

That by his Poyson, I may dye.

But Sublimate Mercury doth revive, when its corrodeing faculty is taken from it: This, *Antimony* doth, and also *Alcalyes*. This *Antimony*, simple *Aqua Fortis* doth not dissolve, by reason of the *Sulphur* mix'd with it, as I have shewed above; but, Salt being added, it presently acts upon it, and separates its *Sulphur*, that it swims atop, like Pitch. This in the *moist way*. Butter of *Antimony*.

So also in the *dry way*, mingle *Antimony* with Mercury sublimate, which I have demonstrated to be Salt, and presently the Saline Spirits desert the Mercury, and corrode the *Regulus* of *Antimony*; but when the Spirits are driven out of the Retort, they run down Saturated with the dissolved *Regulus*, in the form of Butter, which if it be washed with cold water, the powder of *Antimony* falls small, rare, light, and very white, unfitly called *Mercurius vitæ*. But when this Ablution is made with hot water, then it turns Yellowish, and is called *Pulvis Algerotti*. *Merc. Vitæ.* Powder of *Algerotti.*

But the same Butter, if it be dissolved in Spirit of *Nitre*, which again by reason of its similitude with *Sulphur*, doth again corrode Sulphurous and dissolved *Antimony*, and is abstracted by Cohobation, and afterwards applied to the Fire: then (after its manner) it remains constant or fixed; and begins to be called *Bezoar Minerale*, a Cure for great Diseases. But the Mercury, being freed from the Corrosive, representing Metalline Alcaly, is saturated *Bezoar Mineral.*

Cinnabar of *Antimony.*

saturated by the Acidity of the *Sulphur* of *Antimony*, which is also Metalline, and they both constitute an Occult Salt thing, which by the encrease of the fire, is elevated into *Cinnabar*; and this again, with a lighter Alcaly, is reduceable into running *Quick-silver*, as I have shewed in its place.

So that, Gold is not dissolved, without Salt, in Acids, as neither is *Antimony* nor Mercury it self, wherefore Salt doth not destroy Acids, nor on the contrary. Laborious *Minerva* hath discovered This Mystery, which few hitherto have been able to attain unto.

In fine, Salt, if it were at any enmity, either Occult, or Open, with Acids, it would surely be made manifest in the *Butter of Antimony* alone, which is so sensible a thing, that if but one drop of water fall into it, presently the Acid Spirits do associate themselves with the water, and the dissolved *Antimony*, grows white; but cast common Salt, either natural or artificial, or other salt things, and that in quantity, into the said Butter, and it will not be moved nor troubled at all; so far is it from being destroyed thereby.

CHAP. XXVI.

Dicta cum Factis componit.

Words and Deeds compared.

I have shewed that *Alcaly* is in water, and now that *Acidity* is in fire, though by a rude Example, yet it may suffice for our Chymists.

But if any Acid be destroyed, that comes not to pass, by reason of the Salts, as I have said, but the *Alcalizates*, or those of affinity with them, and It is changed into another nature, according to the difference of the Acid; as for example, The Reformer teaches, how to prepare *Crocus Martis*, which he calls *Aperitivus*, with Acids, I approve his way in it. He also teaches to prepare another *Crocus*, which he calls *Astringent*, in Flame only; not considering, that the flame of fire

fire is also Acid; so that This latter Crocus must needs be like the former, you may call it *Astringent*, or *Aperitive* Crocus; according to the effect it works. All inflamable things communicate Acidity to the flame, as Wood, Shrubs, Herbs, *&c.* The *Reformer* braggs that this inflamable Acidity, is the Acid spirit of *Sal Armoniack*, and in this place he plainly is ignorant of it. *In Append. f.* 73.

It may seem to many, that I speak a Paradox, when I say, that the flame of the fire is Acid: I am so far from Recanting it, that I further affirm, Fire comes nearest to the nature of Salt, consisting of *Alcaly* and *Acid*; for which cause it is biting, sharp, acetous, subtilly cutting, piercing, pure, incorruptible, incombustible, and is that which preserves from Corruption. Now as in Salt, I have separated the Acid part, so I shall shew, by this Experiment following, that it is separable also in Flame. Nature alike in every thing. Properties of Fire and Salt.

Lead with Acid dry Wood is burnt into Minium, but 100*l.* of Lead, after it is turned to Minium, makes 110*l.* I demand how the Minium gets 10*l.* in weight? certainly nothing had been added to it, but the flame only: The flame therefore assumed a body in the Lead, and this body, which encreased the Lead from the flame, is of an Acid taste, as the following experiment proves. Lead made *Minium*.

Distil, out of a Glass Retort, with an open fire, some of the self same Wood, with which you burnt the Lead, and there will extil a Liquor, of an Acid taste; which, out of the Retort in form and manner of flame, embraces the Lead, and is mixed with it, and fixed into *Alcaly*. That Volatile *Alcaly* is distilled from Soot, is known to all.

Melt again the Minium into Lead, and there will be only 100*l.* as before, so that the ten pound gained, was neither Minium nor Lead, but the Acid expelled from the Wood. But *This* not being of the nature of Lead, is not Colliquated with it, and *because it is not sufficient for it self singly*, as *Hippocrates* says, in the reducing the Lead, it flies into Element, as I have shewed before concerning Salt of *Tartar*, Oyl, Vinegar, *&c.*

This artificial *Alcaly* out of Lead, being turned into Minium, with fire and vegetable Acid; or the same Lead

Lead made *Litarge.*

with Mineral Acid, made Litarge, if you boil it with Oyl and Fat, then the Alcaly acts upon the Occult Acid of the Fat, after the manner of the Alcalyes: and the Acid again upon the Alcaly, and so they are coagulated in a Neutral thing.

Plaisters of Lead most Ancient, Prepared by Chymical Art.

Thus is made the Emplaister, *Triapharmacum*, as also That of *Cerusse* and others of the like sort, as I have shewn in Sope, the cause of whose inspissation, was hitherto unknown to the Reformer, as appears by his Epistle to me, to wit, *That the Oyl of Tartar, with the Alcaly was inspissated like Pitch* (as Chap. 21.) And he writes thus to Apothecaries, That these are boiled, according to Art. But among Metals, there is none that doth more readily associate with fixed Acid than Lead: For according to the species of the Acid, it changes its form, as I have said of *Alcalyes*. The steam of Vinegar turnes it into white Cerus; *Acidity* in flame, into red Minium; by the Acid of *Sulphur*, fire being added, 'tis turned into black; with Acid Minerals impure and mix'd, 'tis turned into a double Litarge; with the Acid of yellow Clay, 'tis burnt into Glass of a box-like colour; with the Acid of black Clay, into a swarthy vitreous colour, as the Glass-men know; For which cause, Molters and Refiners of Metals do honour it very much, because it absorbs all sorts of Acids, and clears the Metal from all spots.

Lead yields Colours, and Glas.

The Ancients have observed, that all inflamations in living creatures, arise from *Acidity* (* *Hippocrates* attesting the same; *In Man*, says he, *there is Acid, bitter, most Acid, and hundreds of other things, which according to their quantity and strength, have various faculties:*) For which cause they devised several Oyntments and Plaisters of Lead; That they might take away that Acidity; and the oftner those foresaid Unguents are changed, the sooner is the Acid consumed, and the Distemper cured. This consumption of the Acid, in condescention to the capacities of the Vulgar, we call *re-frigeration*, in as much as it mortifies the cause of Heat.

* In his Book of Ancient Medicine.

How Lead cools.

CHAP.

CHAP. XXVII.

A further Probation, that there is Acidity in Flame.

Tincture of Corals.

REverberate whole Corals in an open fire, twelve ounces (for example) for six days and nights (the fire serves the Skilful for distilling Spirit of *Vitriol*) and you will find fifteen ounces (*i. e.*) three ounces encreased, and turned into a most fine powder; this encrease, is nothing else but the Acid from the flame, which dissolves the Corals, and is coagulated and fixed with them, after the manner of Acids, into Salt. If you poure distilled Vinegar on this Salt, it doth not send forth Bubbles, as it otherwise happens in Corals, not reverberated; for they are saturated with Acid, and it dissolves Them into a pellucid Semi-Acid Liquor, which though transparent, and colourless, yet it hath a Latent Sanguineous Redness, which, the affusion of Spirit of *Vitriol*, in a moment makes manifest. 'Twas neither the Vinegar, nor the Spirit of *Vitriol*, which introduced this redness; for then, the Mixture would be always red, when the Magistery of Corals is prepared the common way: wherefore of necessity, this redness must be secretly Latent in the Coral, and by the help of Fire be produced to maturity: of which I shall now forbear to speak more, 'tis enough that, contrary to the sleepy Doctrine of the Reformer, I have shewed, that Acid hath not destroyed this Salt, and that, Tincture of Corals, abides constant in the fire, which you may by ingenuity separate, and it will commend and praise it self.

This Tincture is the Rector or Archeus, as long lited as Coral it self, of great Vertue, not destro'd by fire it self, as I have shewed in Wine.

Antimony fixed by Acid, from fire.

So, place the *Regulus* of *Antimony*, being elevated into Flowers; *E. C.* twelve ounces, on the floure, or hearth, of the Glass-mens Oven, or Furnace, in a large fit Earthen Vessel, well covered, lest the flying Ashes should fall into it, and remove it far from the *Eye* where the

the flame plays, that it be not melted; ſo let it ſtand eight days, afterwards draw the Veſſel nearer to the *Eye*, every fifth day a little, until about the fiftieth day, then you will find the Flowers of the *Regulus* fixed into a ſmall, light, and moſt white powder, and encreaſed by two ounces, by the Acidity drawn from the fire, which pierced the Earthen Veſſel, without hurting it, after the manner of Spirits.

This *Regulus*, was erſt melted, with a gentle fire, now it reſiſts (even Antimonial) Fuſion, unleſs it be urged with quick blowing Bellows, then the Acid Spirits return, from the fire, to their Elements, and you will find twelve ounces of *Regulus*, as I before ſhewed in *Lead*.

In like manner, deal with *Crude Antimony*, and it will part with its Volatile Acid Spirits, and aſſume other more fixed ones from the fire, and is turned into a white powder, like *Antimonium Diaphoreticum*, of greater vertue, in Phyſick, then that which is burnt with *Nitre*: the reaſon is, that here, ſo much of the Sulphur doth not deflagrate with the *Nitre*, but it is here fixed, by its proper Regulus, by the fire, which this Mechanick ſhews: Boil *Antimony* in ſimple water, let it be mixed with three parts of Nitre, and by turns kindled, and calcined, in that Ebullition, the *Nitre* (from the Sulphur of *Antimony* being burnt to Alcaly) diſſolves the Sulphur of the *Antimony*, which is now fixed (as the boiling or bubbling Alcaly of *Tartar* doth diſſolve common *Sulphur*, for Milk, as *Crollius* hath it:) ſprinkle Vinegar on this Solution, being filtrated, warm, (and you ſhall perceive the Odor of the *Sulphur*) which preſently is drunk up by the Alcaly, and the *Sulphur* falls into a white, ſmall, rare, light, and ſpongy Powder, which you muſt waſh: A drachm of this, given with Vinegar, in the Plague is more worth than an ounce of that which is not boiled nor diſſolved.

Milk of *Sulphur* of *Antimony*, of great Vertue.

Fixed Antipeſtilential *Antimony*.

Hence it appears, That the Sulphur of *Antimony*, which elſewhere deflagrates with the Nitre, here is fixed by its proper *Regulus* by the Fire, in the above-named Veſſel, and ſo becomes more perfect, ſo that there is Acidity in the flame of Fire, which I have ſhewed to be imbibed

imbibed by Corals, and Antimony, as well as Lead, and ſo by Iron it ſelf, which with this, and all other Acids, is with fire turned into Ruſt. So that there is no difference, betwixt that *Crocus Martis*, which is made either with manifeſt, or Occult *Acids*; both of them are either binding or looſning. *Crocus Martis.*

CHAP. XXVIII.

The ways and neceſſities of Precipitation diſcovered.

THere are Varieties of Opinions amongſt Writers, concerning the Properties and Operations of Iron, and how; and by what manner, it performs them in Man's body, * *Sennertus* gives us a Catalogue of them, but few of them have hit the Mark, by reaſon of their ignorance of *Hippocrates* his Doctrine. I will therefore ſhew how it adſtringes and how it looſneth. * *L.* 3. *P.* 2. *ſect.* 2. *c.* 7. * *L.* 1. *de Diæt.*

Iron doth manifeſtly bind, and conſequently it ſtrengthens the Stomach and neighbour parts. Therefore it is good in the Dyſentery, Lientery, Diarrhæa, and all Laxative diſeaſes, *&c.* But I hear ſome object, that Iron Medicaments provoke the Terms in Women, and reſtore the defects of the Liver, and Spleen, and ſo do rather Looſen than Bind? I anſwer (not as that Canonical Phyſician, who aſſerted, *That the ſtones of Crabbs were a Mineral, and therefore an enemy to Nature:*) but my anſwer is from the works of Nature, in which I have demonſtrated out of * *Hippocrates*, *That theſe things muſt needs ſo happen by Divine neceſſity*; To wit, that there is often obſerved to wander up and down in us, a certain diſſolved Salt, the Generation whereof, I have ſhewed before in its place, It conſiſting of *Acid* and *Alcali* Compounded, leſs agreeing among themſelves, and unfit for Tranſpiration and Sweat. This, by reaſon of the inequality of the Sapors, doth not obey Purging Medicines, * *L.* 1. *de Diæt.*

cines, as Experience shews: Call *this*, if you will, an Humour truly excrementious, lodging either in the first, or in the last region of the Body, produced either by the Womb, Liver, Spleen, Reins, Sweet-bread, Mesentery, or Stomach; as to this point, 'tis all one. Iron then being taken, which as I have shewed Mechanically, doth easily imbibe all Acids, presently, That Noxious Liquid-Salt, or Excrementitious Humour, runs hastily to the Iron, and adheres to it, that it may dissolve it, and so that Saline Excrement, according to the kind of the Sapor, whiles it sticks to the Iron, and corrodes it, is coagulated (as we have seen it, with the Acid of *Vitriol* to be turned into *Vitriol*, with the Acid of Wine into *Rust: So also it happens in Copper, which, if Vinegar corrode, it becomes Verdigrease; if the same Copper be corroded by Spirit of *Vitriol*, it becomes *Vitriol* of *Venus*; Consonant to this Doctrine is, what I have formerly Ocularly demonstrated concerning *Alcalyes* and *Acids*) but sithence It cannot be assumed into Aliment, therefore it is purged by Stool, with the dissolved Iron, of a black colour; which colour ariseth, when the Acid Salt, corrodes the Iron, and the Alcaly precipitates it into Colcothar, as I have shewed above in its place.

* And becomes the Tincture of *Mars* of the Reformer in his Appendix, *fol.* 83.

It doth not ascend the *Diaphragma*.

But when Iron is drank, dissolved in an Acid Liquor, but grateful to the Stomach, The same Liquors being taken, and throughly admitted, the Iron presently, being unfit, as I said, for Aliment, is separated from the Acid, by the Vertue of the Alcaly in the Mixture; In which Segrégation the aforesaid Salts or Humours flow to the Iron, and adhere to It, as we see it happens to Silver dissolved in *Aqua Fortis*, if thin Plates of Copper be cast into the Solution, then presently the Acidity of the *Aqua Fortis* deserts the Silver, and corrodes the Copper, and the Silver adheres to the Copper, as a compact Powder. Again, put a thin plate of Iron into the Solution, which is now greenish from the Copper, and the water presently leaves the Copper, and corrodes the Iron, and the Copper adheres to the Iron, whiles the Vitriolate water of *Coelaria* corrodes the Iron, then the Copper falls from the water into the place of the Iron, which contained the

As appears in *Acid* Fountains.

I speak not of him, that never saw any thing in his life, but stinking Excrements.

Vitriol

Vitriol unripened, this red powder, melted in the fire, turns to Copper. This Precipitation, many learned Men (but ignorant of *Hippocrates* his Doctrine) have believed to be the transmutation of Iron into Copper): even so Mechanical reason and necessity also do Dictate, that it must be in Man's body, especially, since *Nature is alike in every think*, as the *Old man* speaks. For unless the excrementitious Humour were of a certain Semi-acid Nature and Taste, the Iron would not be dissolved in the body into a green or black mash, as we daily see, that it is, and I have also shewed in its place. And unless the Excrements be so tinged, Iron is unadvisedly given, for it finds not a fit Humour to dissolve it; and in that case, Iron is Astringent, though the *Aperitive Crocus Martis* of the Reformer had been taken by the Mouth. The same thing is to be understood of Acid Spirits, as of *Vitriol*, *Sulphur*, *Glass*, and *Salt*, for These, if they find not a wandering Alcaly in the body of Man, an enemy to Vitality, and therefore Morbous (which the Acid Spirit may receive into it self) they do more hurt than good, for then by their over much Acidity they infect the neighbour Aliment of the Stomach, and make it unfit for Nourishment. A Physician of *Rome*, a friend of mine, *Anno Dom.* 1656, in the time of the Plague, used Spirit of *Sulphur*, in quantity, for a Preservative, who thereupon became * Arthritical, and was afterwards restored by the Alcaly of Animals, as I have elsewhere shewed, concerning the *Feet-Gout*. For the Alcaly imbibes the Acid, wanderingly dispersed over the the body, which was the cause of Disease and Pain in the Ventricles, not being accustomed to things manifestly Acid; for so * *Hippocrates* teacheth. *If any one prescribe Acid meats inconsiderately and without choice, they do no good.*

The use and abuse of *Acids*.

* The Remedy of *Arthritis* is by *Alcalyes*.

* Of Purging Medicines.

On this principle of Precipitation, was the Golden Nail of the great Duke of *Florence* made, which *Ferdinand* the first of happy Memory, graced with this Testimony, which is to be seen with the Nail at *Florence*.

Mr. Leonard Turneisser *in my sight and presence, turned an Iron Nail heated in the fire, and immersed in Oyl, into Gold; done at* Rome *the* 20*th. day of* November *after Dinner*:

A Golden Nail.

Such Nails, I have also, in Sport, sometimes made, with my own hands, but such as deal in Metals the vulgar way, think it altogether impossible that Gold and Iron should Conglutinate; and therefore they firmly believe, that This Nail is really changed out of Iron into Gold, and that which confirms their belief, is, that Gold doth not adhere to Iron; yea Gold melted, corrodes It in a moment, and turns it into Rust *. But Gold is connected with Iron, by means of Precipitation, as I have said, on the same reason and ground, for which Iron precipitates Copper: Cut then an Iron Nail into two parts, moisten the end, at least with Spittle, and presently touch that part with Cupreous Vitriol, and in the very *punctum*, the extremity of the Iron, waxeth red, and hath now acquired the nature of Copper; Now Gold is easily associated to and with Copper; and so fit a Cuspe, or point made of Gold to this Cupreous Iron; and with Borax and Golden Solidature or Soder (which is made of *Copper money, a little Silver and Gold melted at the *Eye* is better) melt it after the accustomed manner, in a fitting Coal-fire, and then you shall have the Golden Nail so much spoken of. *Turneisser* tinged this Nail with *Ferrugo*, wherewith he hid the Gold, and so (without doubt offered it to that great Prince, to handle with his hands, which being so disguised, the Skilfullest person, that is, would have judged to be Iron. And then heating it by the fire, and dipping it in a certain Oyl (as the Testimonial says) and washing away the *Ferrugo*, the Gold appeared. This was the Artifice, if it be worthy of that name.

* As Common *Sulphur* doth.

The passage from one Ens to another, is impossible without a *Medium*, as the Philosopher says. 6. *Phys.*

* Glew of Gold.

But let us return to Iron, which taken at Mouth, frees from Obstructions arising from the aforesaid Excrement, and so becomes Aperitive by accident, in as much as it absorbs that coagulating wandering Acidity, proscribed by Nature, yet of it self, it is still Astringent; wherefore it is *Aperitive* by a specifick and appropriate Vertue, but it *Binds* by a second quality.

Iron Opens and Binds.

CHAP.

CHAP. XXIX.

Nux Cassa.

Shell without Kernel.

I Have declared, that Copper is turned by Vinegar into Ærugo, or Verdigrease. This the Reformer advises us to Distil, *I remember* (says he) *that I have made mention of a certain secret Menstruum, which hitherto the Canine envy of some Malignant and Ingrateful Fools hath caused me to keep secret, amongst my other Arcana's; but now leaving the revenge of all injuries wrongfully offered, by what hand soever, to God, being pressed on by a good conscience, and the benefit of the Publick, I am resolved to publish it, on which the greatest of Remedies do depend, as their main Pillar:* What will our Princely Doctor now teach us? *Spirit of Venus, and an hidden Menstruum*, which for unworthy Mens sake (who can forbear laughing!) he determined to conceal. Oh unskilful Rudeness! who would ever have expected from him, such a great and liberal Contribution, for the publick good, unless he had told us so himself?

Append. f. 72.

A sad severity in Countenance, but no truth in his words, *Ter. Andr.*

O Curas hominum, O quantum est in rebus inane!

O curious Study and vain Care,
Of Men, that vain and empty are?

'Twas more than a hundred years since, that *Basilius Valentinus* published this Distillation of Vinegar (in a Book, which he calls, *A Manuduction to Physick*, Written in the *Germane* Tongue, and Reprinted at *Frankfort* by *Luke Iennis*, *An.* 1625. in Quarto) under the Title of *The true Solution of Pearls.* The Reformer borrows it from him, suppressing the Author's Name, for there it is word

In Aq. Epilept. Pharm. Regia. f. 170.

for word, and this he boasts, not only *for an Universal Solvent*, but (feigns it also to be his own Invention, and inscribes it, *Our Spirit of Venus*) for the *Liquor Alcahest*; So that, not without a fatal Prediction, *John Frederick Bauz*, prefixed the Reformer's Name before the Dispensatory, with an Anagramme worthy of him, as may be there seen. But the Reformer adds without blushing; *This most excellent Spirit is not only of great vertue in Physick, as being highly Curative of Epileptick, Apoplectick, Hysterical, and Hypochondriacal Distempers, being duly and lawfully exhibited; but is as the Liquor Alcahest, and not as other Acid Spirits, who suffer and are destroyed by Solution, and so are turned into another* Ens, &c. I could wish *Basilius*, when he taught us how to distil this Vinegar, had been afraid of Impostors, as *Hippocrates*, *Paracelsus*, and others were. Then the Reformer had never obtruded This, for the Liquor *Alcahest*, nor had loaded it with so many Encomiums, thereby deluding the World. He advises us to buy this Vinegar at any rate, adding these Vain-glorious and Magnificent words; *Enjoy* Courteous Reader, *this Secret, and let me continue in thy good grace, for my faithful Communication of it.* In good time? draw near all ye inquisitive ones, behold a great Secret manifested never so much as dream'd of before? But Nature laughs to see such lyes held forth for truths: There are some, who, without any great labour, time, or expence, do distil a like and much more powerful Liquor out of Lees of Vinegar, into a great Receiver, which yet they proclaim not for *Alcahest*.

To what purpose these uncouth, costly, laborious, and nauseous Compositions, if Vinegar, which is grateful to all, doth the deed.

Turpe est Doctori, &c.

Let us therefore take notice of the Subject from which the Reformer distils this *Wonderful Solvent*, which, with a worthy Name, he appropriates to himself, and calls it *Our Spirit of Venus*.

It is *Ærugo* or *Verdigrease*, which is thus made, thin Copper plates are put into Mother of Wine, when it is sowre, this Acidity corroding the Copper, is coagulated with it into Salt, as it happens to every Acid by Corrosion, as I have Ocularly demonstrated in *Lead* and *Coral*: The Reformer mundifies this green Salt with Distilled Vinegar, from which surely nothing but Vinegar can be distilled,

diſtilled, as *Baſilius* in the fore-cited place, doth ingeniouſly confeſs; as it happens to Spirit of *Vitriol* by corroding Copper, it becomes *Vitriol*; from which, if you diſtil it, you can extract nothing elſe but the ſame Stagma or Spirit of *Vitriol*, which you poured on it, according to the Old ſaying, *Nihil dat, quod in ſe, non habet*: Melt the remaining *Caput Mortuum* or Fæces, in a Pipkin, adding thereto a little *Nitre* and *Tartar*, then the Copper returns to Copper, as it was before it was changed with the Vinegar in Verdigreaſe. This is the Secret and myſterious buſineſs the Reformer out of his over-flowing Liberality, is willing to communicate for the Publick good, and *perſwades us to buy at any rate*, ſaying, *Enjoy*, Reader, *this Secret*, &c. Away with this Cheating, which even the Vulgar do deride, not believe? Men know well enough, that Secrets are not to be revealed, but in Parables, Allegories, Metaphors, and ſuch like Diſguiſings; So *Hippocrates* adviſes, and both He and Venerable Antiquity doth the ſame: *Speak not* (ſays the Wiſeman) *in the ears of a Fool, for he will deſpiſe the Inſtructions of thy mouth.* So *Johannes Picus* in his Book of the Dignity of Man, *Pythagoras*, *Plato*, *Boetius*, *Macrobius* in *Scipio*'s Dream, *Cornelius Tacitus*, &c. All of them, with one Mouth, affirm that Secrets are not to be divulged, that ſo unworthy men may not be partakers of them.

Secrets diſcovered, loſe their eſteem.

But go to? may we not uſe Vinegar ſimply diſtilled with leſs labour and charge? ſince it is one and the ſame thing? Do not the Writers of the Elements of *Chymiſtry* teach us to prepare Salt of Pearls and Corals with Diſtilled Vinegar? and afterwards to waſh it? which yet is found to be unprofitable, in as much as the *Acids* are coagulated with the Solution, as I have often ſhewed before.

But to contract all in a few words, *The Vinegar and Spirit of Venus* of our Reformer, are nothing but water impregnated with an Acid Volatile Salt, which, if it corrodes any thing, 'tis preſently Coagulated, which afterwards by combuſtion is fixed into Alcaly.

Wherein now doth the Magiſtery of Corals and Pearls of the Reformer exceed That which the Rudiments teach? What Prerogative one hath above the other,

we may learn from Spirit of *Vitriol* and *Sulphur*, which precipitates both; the reason whereof is, that the more potent Acidity apprehends the Solution, and in it undergoes Coagulation, and therefore encreases in weight, neither can you fetch it back, but by a violent fire.

Append. f. 13. That Experiment is fallacious, if Knowledge precede it not.

Is it so indeed? doth our Reformer *so satisfy God, his Neighbour, and the Truth?* as he affirms in his *Animadversions?* Are these the *Inventions taken from true Reason and Experience, hitherto seen, and observed by none else, for the comfort of Mankind?* As he boasts in the Preface of his *Appendix.*

Was *Harus* so to be deluded? to whom he promises in his Epistle Dedicatory, to discover what he knew not, to wit, to rectify *the Genuine and usual method of compounding Medicines, and to free it from Errors, lest the People should be put to the loss of their Money and Health, but that they may live more happily.* To wit, by proclaiming Vinegar for *Alcahest.*

He that speaketh the Truth, may do it without labour and trouble; and I wonder you sweat and labour so? *Dantis. in Append. f.* 13.

Are these the things, *Which leaving his necessary businesses he published to the People with so great labour*, as his Epilogue speaks?

This Reformer being drunk with his own Vinegar, cants out Wonders, *Our Spirit of Venus* (says he) *Extracts an Adstringent Tincture from Filings of Steel.* News indeed! as if all Vinegar with Iron filed, did not grow Red? 'tis known * to do so to all Blacksmiths. In his *Mantissa Hermetica*, a little before he teaches, that he can prepare *Adstringent Crocus most exactly by Reverberation alone, without the mixture of any other thing*: Now, to procure Credit to his Vinegar, he grants *both*: What is this, but impatiently and foolishly to play the Trifler, yea to pretend to teach the contrarieties of Salts and Vinegar, and yet to know neither.

* *f.* 798. Vinegar grows Red with shavings of Iron, but Spirit of *Vitriol* is coagulated with it into *Vitriol.*

CHAP.

CHAP. XXX.

Exitus Acta probat.

The End crowns the Action.

Out of a desire of Knowledge, I red the *Pharmacopœa Regia*, Writ by our Reformer, out of a vain itch for Glory, but full of many Absurdities. He promises to Kings a *Narcotick Sulphur of Vitriol*, under the Title of *Laudanum*; but it may be truly said, of it, The King escaped by the help of Fate, and not of the *Narcotick* Sulphur of *Vitriol*, which is no where found in the whole Book of Receipts: So also he promises to Queens a *Ludus Præparatus* to beget Milk, which yet he never saw or knew: Hence came the common Proverb, *Mentiri ut Medicus.* This *Sulphur* of his, and that *Ludus Præparatus*, change not their Soil, nor pass beyond the Seas; they like well the place of their Nativity, and love not to stir further, *viz.* then the brains of the Reformer. *f.* 849.

So in his splendid *Appendix* to his *Pharmacopœa Regia*, almost in all his *Compositions*, we have these Pompous words, *Magisterium Nostrum Solubile.* An Ostentation so vain, that it would raise laughter in *Heraclitus* himself, which yet is nothing else, but Pearls and Corals corroded with Vinegar, as is known to every Fresh-water Physician. But he himself undervalues and laughs at the *long Receipts of Writers*; but who ever saw or read longer than those in his *Pharmapœa Regia?* who, more Inelegant ones? Take that *Compositum* for an example, which, by a specious Title, he calls *Pilula Regia*, where *Opium* produces all the effects which he promises. To what purpose then is the corroded Gold, which, being Simple, hath no affinity with *Opium*, the ground of the Pills; of these *Homer* sings, In *Append.* to *Animad. f.* 533. *f.* 123.

Pharmaca

Pharmaca mixta salubria multa, & noxia multa.

Of mixed Druggs, some hurtful are, some good.

Truly the huddling together of *Simples*, made by unskilful hands, do infatuate and destroy Princes, and *causes the nick of the Cure-time, which in a moment passes away, to be spent in uncertain conjectures.* I shall add but this one thing. I advise you to avoid Receipt-mongers as much as Jugglers, who do boast of their Prodigious Compositions, and so Huckster and make Merchandize of our Diseases, and as it were, cast lots for our Lives: I say it is impossible, or at least very difficult, to determine any thing certainly, unless only Putatively and Conjecturally, as I have shewed in the Nettle only. But as often as *simple* things do not effect what was desired, then it is that they want *Composition*, as I have clearly shewed in Vulnerary Potions, in Tinctures and Inks, and I will yet further evidence by this one example: Take two parts or pugils of Juice of Sage, of Vitriol of *Mars* one part or pugil, both of these mixed, do suddenly grow black, for the Occult Alcaly of the Sage doth absorb the Acid of the Vitriol; In an hour the Acid, as it is a Mineral, doth conquer the feeble Alcaly of the Vegetable, and the *Compositum* waxes green: To which add further, three parts of Vitriol, then it assumes not a black colour (as might in reason be thought) but the Alcaly then consumes at least the subtle Acid as turns the Vitriol into *Ocre*, as it happens to It, when the Spirit by little and little decays; but whither do I digress, seeing I know that what cannot be changed and altered, is to be born?

Hipp. 1. Aph. 1.

One matter alone cannot have two Species together; which our Chymists must diligently mark.

Append. f. 48.

But the Reformer doth perpetually commend such Compositions, saying, *That both the Sick and Physicians too, would be in an happy case, if such Medicines which are truly Royal, were at hand, and yet of so small a price, that they may be used by the poor*, &c.

Now to you therefore, O ye Ingenious *Pharmacopœans*, do I direct my speech, I beseech you to cast up the accompt, and to judge (not of many unprofitable and laborious

borious Compoſitions, which if they were all at hand and in readineſs, the whole City of *Auſpurgh* would ſcarce contain them, but only of the diſtilling of this Vinegar from Verdigreaſe for corroding Coral, for if you reckon up the Veſſels and Inſtruments of Art requiſite for the purpoſe, with the Time which is to be ſpent in it, where will there a poor man be found that can be at ſuch expence? but if this and ſuch like artificial Compoſitions be diſpenſed and ſold for a ſmall price,

Tunc labor in damno eſt, creſcit mortalis egeſtas,
Then our Labour procures Loſs,
And Poverty becomes our Croſs.

But if I ſhould longer inſiſt on all the groſs and Erroneous Opinions of our Reformer which are ſcattered here and there, I might ſwell a Volume, which may be plainly ſeen in his firſt Syrup. * This, as others, was invented by the Ancients, that it might be Adminiſtred to every individual perſon, and ſo be in readineſs and at hand in Shops; but ſeeing many perſons can hardly endure the ſmells, eſpecially of *Spike*, without belching and turning of the Stomach, yea they reſiſt Digeſtion, as appears in Meats ſeaſoned with Spice; who do deſtroy the ferment of the Stomach; Hence the Ancients commend *ſimple* Food as moſt wholſome. For this cauſe, even for this Syrup, they choſe *Pontick Wormwood* as leſs Odorous, and boiled it in old Wine, together with *Spike*, that the Odor, together with the Spirit of Wine (to which it is eaſily aſſociated) might wholly be expelled and gone; which, the addition of Juice of *Quinces* ſhews; for unleſs This had been the Intention of the Ancients, inſtead of this Syrup, they had uſed *Quince-Wine* and *Wormwood-Wine*, as we may * ſee in *Dioſcorides*. They preſerved the remainder with Sugar *from* an hoary Vinew, and thickned it into a Syrup.

So alſo ſundry ſorts of Wines, mixed together and drunk, as is uſual in Feaſts and Banquets, do not only create trouble and labour to the *Rector* in Man (which I ſhewed above, *Chap.* 15. out of

* Of *Wormwood*, *Pharmac. f.* 17.

Simple Food moſt profitable; the heaping together of Sapors is Peſtiferous. *Plin. l.* 11. *c.* 53. *f.*

* *L.* 5. *c.* 49.

* Of the Humours.

Hippocrates, hath his ſeat in the mouth of the Stomach) to unite them, but moreover do eaſily Inebriate Men, and by tender Perſons are ſometimes violently caſt out by Vomit; but when the Juices of the ſame Grapes (though Multiformous and Various) are united together by *Fermentation*, then from and by diverſe *Rectors*, one wholſome drink is made, not offending the Stomach; even as *Treacle* is made out of diverſe *ſimples*, co-united by *Fermentation*, over which, one only *Rector* doth Predominate: Hence It is commended by *Avicen*, as of wonderful Vertue, as I have noted in my Preface.

Gio. Boccat. Nov. 7. Fab. 2. obſerved this alſo.

But ſince it is none of my Intent to diſcover Pebbles in the Sea-ſhore (as the Proverb is) where there is ſuch an infinite number of them, eſpecially not being delighted with this kind of Writing, it is againſt my *Genius* to inſiſt any longer on theſe Trifles, and therefore I will now withdraw my Pen and Hand.

This is the Streſs of the Matter, The Reformer came to act his Part on the Stage before he knew *That Nature did act alike in every thing.*

Now for a Concluſion, a word or two to our *Friends* in their ears; the *Acid* doth inform the *Alcaly*; with Theſe, the ancient Foundations of Old Phyſick and of the Viperine Salt, do abſolutely agree in a perpetual Concord and an immutable Similitude, (as I have ſhewed to thoſe that underſtand me aright) from the decree of Nature it ſelf, and out of the Doctrine of my *Hippocrates*, by the moſt Harmonious and Mechanick Reaſon, and the higheſt neceſſity.)

The ſpecifick Rector dwells in the *Acid*, which informs the *Alcaly*.

My pretended Friend endeavouring heretofore to learn this conſent of *Nature* and *Art* by examples, and not being able to do it, he rages like a mad Dog, and bites all that come near him; preferring himſelf far before others, as appears throughout all his Writings; So every Bird likes his own note beſt, neither is any thing more unjuſt than an unskilful Man, (as *Terence* ſpeakes) *Who thinks nothing well done, but what he does himſelf.*

In Adelp. act. 1. ſc. 2.

FINIS.

AN

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FINIS.

HIS

CLAVIS

To the Ancient Hippocratical

PHYSICK

OR

MEDICINE;

Made by Manual Experience in the very Fountains of

NATURE.

WHEREBY,

Through Fire and Water, in a Method unheard of before, the Occult Mysteries of *Nature* and *Art* are Unlocked and clearly Explained by a Compendious way of

OPERATION.

Senec. Epist.

A man can never more torment the Envious, than by applying ones self to Vertue and Glory.

LONDON,

Printed by *Tho. James*, and are to be Sold by *Nath. Crouch* in *Exchange-Alley* over against the *Royal Exchange* in *Corn-Hill*, 1677.

It is an Uncivil thing (*says* H. Khunrat) *to judge of the* whole *of a Book, by* one part *of it only, unleſs the whole Book be firſt Read over, and throughly weighed.*

00---483

To the Serene and Mighty Prince, the Lord

CHRISTIANUS ALBERTUS

By the Grace of God,

Heir of *Norway*, Duke of *Sleſwick*, and *Holſatia*, *Stormar*, and *Dithmarſh*,

Earl of *Oldenburg* and *Delmenhorſt*,

His very good Lord.

IT was the cuſtome of the Firſt Philoſophers (Moſt Serene and Mighty Prince) that whatſoever Secrets of Things, or Myſteries of Nature, they found out, they would immediately impoſe Divine Names on them; and ſo, as much as they could, hide them from the Vulgar; or elſe they would relate them under diſguiſed Words, Forreign and unuſual Terms, Allegories, Ænigma's, and Metaphorical Speeches, either becauſe they feared the ſcience of the Unskilful Multitude, or elſe being perſwaded, that thoſe Abſtruſe things would meet with no approbation, if they were eaſily underſtood.

Hippocrates of *Coos*, treading in the ſame ſteps, that Divine and Venerable Old-man, and deſervedly Chief in this moſt Famous Art (in whoſe Praiſes the Ancients, and all Neotericks have ſufficiently Expatiated) ſhews the hidden Foundation of this Noble Science, in theſe words. *If*

there be any thing Divine in Diſeaſes, the knowledge and fore-ſight alſo of That is to be ſought after, if a Man would approve himſelf a good and admirable Phyſician. But what that *Divine* Thing was, he no where clearly diſcovered, nay, he Studiouſly and of purpoſe concealed it, expreſly affirming, that nothing ought to be ſpoken or publiſhed in this Art, ſave what was known to *Plebeians*. On which account, *Phyſick* was heretofore eſteemed *Sacred*, and the gift of God, ſo that all the Ancients were of opinion, that It could hardly be attained unto by Humane Underſtandings, becauſe the Foundations thereof ſeemed ſo abſtruſe, hidden, and admirable, that They were not to be found out by the ſtrength of Nature; And although, heretofore, and in all Ages, Men of great account for acuteneſs of Wit, and Skill in *Phyſick*, have Illuſtrated Its Doctrine, yet there is nothing extant in their Writings in clear and expreſs words, neither can any thing be culled out from thence, but what is ſullied with Obſcurity: They all endeavouring as much as they could, more to eclipſe and darken It: *Neoterick Phyſicians* who ſucceeded them, in Writing, Diſputing, and deſiring to increaſe this Art, have falne to pieces amongſt themſelves, and contemning that *Divine* thing in Diſeaſes, rail at one another, and are divided into ſeveral Sects; neither doth the Diviſion ceaſe to this very day: For one deſires to be ſtyled a *Chymiſt* or *Methodiſt*, another a *Galeniſt*, a third a *Dogmatiſt* or *Canoniſt*, ſo that this moſt Noble Ancient Hippocratical Medicine, which is but One, is now, not only rent into many Sects, but is alſo overcharged with an infinite number of Books; by which a lover of, and enquirer

quirer after Truth, is not only confounded, but muſt needs be over-whelmed: There being ſuch a vaſt Ocean of Them, and ſo great a variety of Writers, ſubtilly ſpinning out their Arguments *pro* and *con*.

In the mean time, I was always of opinion that That before-mentioned ſhort Sentence of *Hippocrates* was to be deeply weighed, and the rather, becauſe that Famous Man, whom Antiquity did almoſt reverence as a Deity, comprehended that great Supellex and Furniture of Things which he had in his mind, in ſhort and conciſe Aphoriſmes and Speeches. Excited therefore by my reſpect and love to Him, I began to Inveſtigate what that *Divine* thing was; for without the Plenary knowledge of It, the Art of Cureing Diſeaſes would always be Mutilous, and only Inchoative, never fully and abſolutely compleat in all its parts.

Some there are who do accuſe thoſe men of Impudence, and do alſo Contumelioufly reproach them, who do their utmoſt to reſtore and underprop Sciences (delivered indeed by the Ancients, but now almoſt worn out by age, and Adulterated beſides) or elſe who do endeavour to add to them, or illuſtrate them: moreover they labour to Degrade ſuch perſons from the firſt Knowledge of things, and ſo to diſ-inherit them from their poſſeſſion of ancient Learning; by whoſe Calumnies the Enquirers after Truth, are deterred and led out of the right way.

If the ancient Philoſophers had taken this courſe to reproach the Labours and Studies of Thoſe that went before them, they had never pierced into the inward knowledge of Nature, but the Truth in many Sciences would as yet have been buryed

in

in Obſcurity, and very few would have attained to any light in the Secrets of Nature.

But ſince Thoſe Philoſophers were pleaſed with another way and manner of Study, not being deterred or taken off from their honeſt Labour by the tongues of Revilers, but rather more earneſtly applying themſelves to their Diſquiſitions and Studies; ſo that almoſt in every age, ſome one or other Art and Science was hatched or elſe retrieved, and from ſmall beginnings, promoted to great encreaſe.

Semblably, why may not I more clearly open the ſenſe of *Hippocrates*? That ſo the Ancient and Noble Science of *Phyſick*, and Method of *Cures* may receive an advancement? why may it not be lawful for me to Contemplate that *divine*, abſtruſe and admirable Thing, as well in Diſeaſes as Remedies? and to reſtore It from Darkneſs to Light? Let the Tongues of Slanderers be ſilent, let them not blame me, that being but a Puny, I firſt of all bear the Lamp to all that ſeek for Truth, in this Argument. Let all ſuch Flies and Cantharides be packing, for as the One pitches on the flouriſhing Corn, and the Other fly into the ſweeteſt Oyntments; ſo theſe fooliſh and ſloathful Calumniators ceaſe not to detract from the labours and manners of other men, perſwading themſelves that they ſhall catch much Honour and Glory, by fiſhing for it in the diſgracing of others.

Avaunt ſuch Thorny Medickes; Let them continually go a begging, and ſpend their time in collecting raw Receits, reformed neither by Reaſon, Method, nor Judgement; which, *Hippocrates* diſapproves and proſcribes in the very entrance into

into this Art, as unſafe, becauſe not underſtood. *Experiment*, ſays he upon this account, *is fallacious*: Neither let them Object to me, this my *Inſtitution*, as a new and unprofitable piece, whereas indeed It is moſt Ancient, and found moſt true by ſolid Experience; not that I am ſo vain and inſolent, as to boaſt my ſelf to be the *Author* of It, I only profeſs my ſelf to be its Interpreter and Explainer.

Theſe things I determined to do in a Book by it ſelf, and therefore I pre-emitted my *Hippocrates Chymicus*, which Book ſeem ed neceſſary for the demonſtration of the Subſequent Doctrine by known Examples. But now, ſeeing Malign Ignorance raigns in Our Art, I think it better to change my Reſolution, and to reduce into this *Compendium*, what and how much of *Divinity* is in Ancient Medicine, as alſo in Natural Philoſophy, and in all things; All which ſhall be diſcuſſed, for the ſake of the Prudent, in this Little Book.

I determined, Mighty Prince, and my gracious Lord, to Dedicate this my grand Endeavour to You, not with an intent to Blazon the *Genealogy* of Yours and Your Anceſtors moſt Auguſt Houſe, that be far from me, for I know that all Adulation doth diſpleaſe Your Highneſs; but becauſe You are a Favourer of hidden Sciences, and of all admirable Things, and eſpecially a Patron of the Muſes: which evidently appears, not only by that flouriſhing Academy which you have lately erected, but furthermore by thoſe great Largeſſes and Stipends, wherewith you have endowed its choice Members, and learned Profeſſors, out of Your incredible Clemency and Favour.

vour. To which may be added Your Highneſſes ſingular Courteſy, Bounty, and Benevolence, extended towards Me in particular, your poor Client, the laſt year; and alſo that unſpeakable Beneficence, which Your Father, of happy Memory, a few years ſince, ſhewed towards me, which you by a rare Example have alſo doubled and outdone: Which conſideration alone had been ſufficient to have obliged me to make this Dedication to Your Self, and ſo to hang up this little Table on the publick Altar of Immortality, not only that my Writings may hereby ſpeak to the whole World, but that I might manifeſt the ſymbol of a grateful mind, and might teſtify and profeſs my obſervance of You.

Be pleaſed therefore, *Great Sir*, favourably to accept of that admired *Divine* Thing of *Hippocrates*, anciently adorned with ſomany Trophies, now conſecrated to Your *Mighty Name*, and let it find a place there, whither the Meſſengers of a grateful mind are wont to be admitted; which, as I ſupplicate with that humility which becomes me, So I alſo beſeech Almighty God from the bottom of my heart, long to preſerve Your Highneſs in ſafety and proſperity; ſo prayes

VENICE *the Ides of November*, 1668.

Your Highneſſes moſt devoted

TACHENIUS.

THE

tongue devise mischief, like a sharp Razor, and love evil more than good, and so rashly accuse and condemn others, according to the Psalmists words. But how easily their incredible stupidity and ignorance may be, and is, obviated by me, by means of this Ancient Hippocratical Medicine, *there are no better witnesses then those Noble and Worthy Persons amongst whom I live, and am daily conversant with. And as the Rock breaks and repels the surging waves which assault it (it self, remaining unmoveable) so it becomes me patiently to hear, and at the same time to contemn and dispise the reproaches and non-sensical objections of unskilful ones, without any perturbation of mind, and without any bitterness and wrath.*

For on the 28th day of Auguſt, 1668, *having received a Book, though Licensed and Approved, yet full of ridiculousness and folly; a few days after (my health requiring it) I went on a sudden to* Millaine, *to that Illustrious Person, The Lord Marquess* Fiorenza, *a Noble Senator of that City, and I compleated* this Hippocratical Doctrine *in my Chariot on the way; yea, I had published it compleat, before the last of the Calends of* November, *the same year (I mean as compleat as the nature of the argument required) unless the censure of the Inquisitors had retarded my purpose; which I think fit, gentle Reader, to acquaint thee with. Favour me therefore, if thou art in thy right mind, and remember* Hippocrates *his Advice, which is, not to divulge or make known any thing, but what is within the Ken and Cognizance of Rusticks and Plebeians. Farewell.*

Otto

[This and the next leaf should immediately precede Cc (p. 8)]

Otto Tachenius

HIS

KEY

To the Ancient

HIPPOCRATICAL LEARNING.

CHAP. I.

Acid *and* Alcaly, *the most Ancient Principles of Things, what they are?*



TO know things is to know them by their Causes, as *Aristotle* Teaches in the first of his Physicks. Now the Causes are Matter, Form, and Efficient; Matter is that, of which a thing is made, for in Nature there is no thing which is not made of some pre-existent and subject matter; Form, which gives being or *esse* to the thing, and by which the thing receives its name, is it self invisible; the Efficient Cause is that, which moves the matter to its proper end.

Hippocrates reduces all these three Causes into two necessary and sufficient Principles, calling them *Fire*, and *Water*: *Raimund* calls them *Entia Realia*; *Basilius Pugliet*, and in another place, *Gladiatores*; others stile them *Lis* and *Concordia*; *Attraction*, and *Repulsion*; *Rarefaction*

Fire and Water.

The Principles of *Hippocrates*, *Acid* and *Alcaly*.

action and *Condenſation*, *Male* and *Female*, &c. But I, for the clearer knowledge and explanation of them, do call thoſe two Principles of *Hippocrates*, *Acid* and *Alcaly*, becauſe all things in the Univerſe are made up of thoſe two Univerſal Principles, as I ſhall gradually ſhew by Experience, (ſo is alſo, *that one only* Medicine or Phyſick of the Ancients) To which yet a third doth inſeparably adhere: Hence aroſe *Sal*, *Sulphur* and *Mercury*, the Three Principles of ſome Philoſophers, and rightly to, as will more clearly appear in the progreſs. Theſe two, either perpetually burn in Love one towards another, or elſe are at perpetual variance, are multiplied, and one is contrary to the other; ſo that the death of one is the life of the other, and that which one produces another deſtroys; that ſo from this another more noble thing may again ariſe.

Hence it is, that *Hippocrates* with good Reaſon affirms, That theſe two Elements *Fire* and *Water*, or *Acid* and *Alcaly*, can do all things, and that all things are in them. From the *Acid* do proceed two Maſculine Qualities, to wit, *Hot* and *Dry*, from the *Alcaly*, as many Female ones, *viz.* *Cold* and *Moiſt*, all flowing forth for the generation of mixed bodies, for which reaſon they do concur and are commixed. The two greater Lights do preſide over thoſe two as Principle Elements. *The Sun*, is the Author of the Fire of Nature, and *the Moon*, the Miſtris of Humids. *Matter* or Hyle is therefore called the *Principle* of all things, becauſe all things in an inviſible manner, are generated of *Fire* and *Water*. From thoſe two is made up the innate *Calid* of all things, which *Hippocrates* ſays, is very much in them, as they increaſe; the matter will be moſt clear when we ſhall ſpeake not only to the ears, but to the eyes alſo.

CHAP.

THE PREFACE
TO THE
COURTEOUS READER
And Lover of the Ancient
Hippocratical *MEDICINE.*

IN the Inquiſt after the hidden Cauſes of Things, how prone Men are to erre and to be miſtaken, without the help of True Experiments, it eaſily appears by that common, and in this age, Epidemical Complaint (which I my ſelf do alſo think not altogether groundleſs) concerning the inconſiderate edition and multitude of New Books; partly, becauſe the raſh publication of the Writings of Scioliſts and vain Perſons, is of it ſelf odious, partly alſo, becauſe ſuch a multiplicity of raw Pamphlets doth prejudice even our common Studies, and takes off the minds of many from Reading the Books of the Ancients, which are full fraught with accurate Wiſdom and Inſtruction: whence probably it may come to paſs, that the Studies of the Ancients, in inquiring after Truth, may be leſs eſteemed and regarded by us. And if any one demand, why do I then publiſh this preſent Tract? A piece Compoſed with no Maturity of Judgment, but thruſt forth in great haſte and temerity; and conſequently, in no wiſe to be compared, in point of Uſefulneſs, with the Monuments of the Ancients. To him I anſwer, There are two Cauſes, which moved me again to put Pen to Paper, and to emit to publick view this Piece *of Ancient Medicine, Firſt, in the Year 1666, I Printed the neceſſary Opinions of the Old Philoſophers, under the Title of* Hippocrates Chymicus; *and there ſhewed by clear Arguments deduced from Experience, that* Fire *and* Water

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in essence, root, and property, ought to be esteemed the Primordial Principles of all Things (since the Divine Old Man Hippocrates *in his first Book of* Diæt *treats of the same, after the manner of the* Pythagoreans, *wittily enough, yet most obscurely, perhaps fearing the ridiculous censure and inept confutation of such as the* Austrian *and* Norinberg *Doctors of Physick, and their foul mouthed companions, who are craftily busied with their Rustick Muse, only about the barks and outside of things) because in finding out the secret and hidden Causes of things,* These *appear to be more powerful, then all probable Conjectures and Vulgar Placits of Philosophers; and I did it, for no other end and purpose, but out of a desire to know the Truth, which every honest man should cordially embrace; so* Aristotle *Teaches in the first Book of his* Ethickes, Chap. 4. It is better, says he, yea, it is our Duty, so Truth may be secured, to alter and cancel our own Opinions and Decrees. *Now whosoever shall Read and rightly Understand the Books of the Ancients, will undeniably confess, that I have as well in my* Hippocrates Chymicus, *as in this* little Book, *spoken the Truth, and that I have discovered Natural Principles and Rare Mysteries in a clear Vein of Speech.*

In demonstrating of these things, I have observed the order of Geometricians, who from the least point *and most easy foundations, do gradually ascend to matters most great and difficult, by which an ingenious mind at length climbs even above the Stars: So also, The Ancient Hippocratical Medicine and the Method of my Science, in a convenient order, first, shew things less rare, yea, things most commonly known, and ascending from them by degrees, It exhibits things more choice and excellent.* So Hermes *from an Egg,* Hippocrates *from Ants,* Morienus *from a Garment,* Basilius *from Ale,* Cosmopolita *from Colours,* &c. *at length in an admirable manner; as well in the Great as Less World (for there is the same Reason in both) have unlocked the Closets and Secrets of Nature, that so the Principles, Reasons, and Causes of Things may be clearly seen, as it were in a Looking-glass.*

By this my private, plain, and safe method, many Learned Men (whom I shall not name for fear of exposing them to

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the ridiculous Cenſure of the Deans and their Fellows) being addicted to the Study of this Ancient Philoſophy, have confeſſed that they have reaped much benefit; for in this my way, they have found that ſaying of Pythagoras, Nature is in every thing alike, *to carry with it not a counterfeit and diſguiſed, but a ſincere and infallible Truth.*

But ſince it is an old Calamity amongſt Men, that Vertue is always oppreſſed by violence, but Vice and Falſhood, like froth and ſcum, ſwims a-top in the impure pot of this World; ſo alſo ſome have endeavoured to defame my Hippocrates Chymicus, *which is ſupported by Ancient Authority, Experience and Reaſon, and to diſpoil it of its Vertue and Truth, by mutilating words, and perverting Sentences; that ſo they might not only caſt dirt in the Face of Ancient Medicine, but alſo be found falſaries and committers of the crime of Defamation againſt Law and Right.*

To prevent this wile, and to apply ſome remedy to this crafty machination, it was altogether neceſſary for me to meditate and reſolve upon a new Edition of the Ancient Truth; for I began to think with my ſelf, that Young Students might reap much more benefit from my Doctrine, if what had been maliciouſly changed, perverted and caſtrated, might come forth more entire and corrected; ſo that this is the ſecond cauſe why I again ſet forth this part of Ancient Medicine, *which I have Adorned and Confirmed with many excellent Experiments and Reaſons, drawn from the Ancient Fountains of Nature; And I have moreover ſo clearly explained the cauſes of things, that for the future no man in his right wits can reaſonably impugne my Principal Foundations of the Truth. So that Students, who love the Truth (of whom I hope there are many) may be much aſſiſted by this* Iſagoge *and Manuduction.*

There is no doubt but virulent envy, the inſeparable companion of Vertue, will object it to me as a crime (as it did heretofore, firſt, becauſe I ſhewed the ſincere way of ſublimating of Mercury; *which Calumny was heard by me not without laughter, but that offence is to be pardoned to ſuch Junie Interpreters of Nature, and their Repentance to be hoped for: and ſecondly, becauſe in the 28*

Chap-

Chapter of my Hippocrates Chymicus, I taught the way of conglutinating Gold and Iron) I ſay, it will be imputed to me that I now diſcover and bring to light, things hitherto ſecret and concealed. But do you not, for this, raſhly, and without throughly weighing my cauſe, condemn the guiltleſs, for it becomes a Judge to hear the Reaſons on both ſides of the Parties, betwixt whom he is to give Sentence: If it ſeem a fault that I have exhibited the Truth of Hippocratical Medicine, hitherto unknown to all of you, nakedly before you, yet be not preſently enraged, nor caſt forth reproachful ſpeeches againſt me, but firſt of all conſider, whether it having been ſullyed with falſe receits and impoſtures, comes not now forth, nearer to the clear Truth, then remoter from it? and next, whether its luſtre be not more encreaſed than diminiſhed? By means whereof, perhaps in a fitter ſeaſon, ſhe her ſelf will give thanks to her Foſterers and Refiners, neither will ſhe deny them her Patronage againſt the Crafts and Frauds of Impoſtors, nor with-draw her defence from them againſt the fierce darts of ignorance, leaſt the former, like wild beaſts, envying at another mans good, and the latter enraged and hood-winked by it own blindneſs, ſhould any longer contumeliouſly and petulantly break in upon the pleaſant Gardens and promiſing Crop of this Ancient Hippocratical Medicine; and ſo tread down and lay waſte the praiſe-worthy Labours of ſuch Wiſe Men as have gone before us.

Tis in vain for them to terrify me with their bug-bears, I ſcorn all their endeavours; for I have choſen Truth for my faithful and powerful Protectreſs, which ſhall now come forth and appear in open view, not as fools do in licentiouſneſs of revenge, repelling force by force, but with the rod of reaſon and modeſty, it ſhall ſmite and ſcourge ſuch fooliſh detractors, that they may repent of their ſimplicity and folly, and hereafter be aſhamed to ſnarle at, or bite this Ancient Hypocratical Medicine with their livid and impure mouths and teeth. It is thy part, Courteous Reader, to ſtop the mouths of ſuch Barretors, furiouſly railing againſt me, and to bridle their lying and reproachful tongues, leſt they ſhould glory in their own wickedneſs, and all the day long their heart ſhould meditate unrighteouſneſs, and their

tongue

CHAP. II.

Acid, *the most Ancient Principle, as being Spiritual, is not subjected to the Censure or Judgement of the Senses.*

MY *Hippocrates Chymicus*, in the 10th and 18th Chapter, shews in Wine and Tartar, that the *Fire* of *Hippocrates*, the formal Principle of things, can be separated by no Analytick Destruction, nor by any Ingenuity of Art. This the Prince of the Academicks calls *Forma.* The Ancients (as also the sacred Philosopher) calls it *Light*, and *Sulphur* from its Similitude, because that (like *Sulphur*) it manifests it self to be both occultly *Acid*, and also pinguous; to This they gave the first place, styling it the *Vital and Masculine Spirit*, because in it, the seeds of all things are contained (though imperceptibly as to our senses:) for we must confess that all things do consist of insensible principles, as *Lucretius* speaks *Lib* 2. and all things have their original from it, and there is nothing produced in the whole world, but by it, it hath its seat in the Air; because the Wind carries it in its belly; and the Father of it, says *Hermes* in *Parva Schedula*, is the *Sun*, whence the lofty witted *Lullius* in *Testament.* Chap. 67. We, says he, with many others, call it the *Child* of the *Sun*, for first it was generated through the influence of the Sun, by Nature, without the help of Science or Art: And therefore *Aristotle* called the *Sun* the Father, and the *Earth* the Mother of all Vegetables; because the Sun impregnates the Earth with its vivifying heat; which afterwards is turned into natural heat, and this is multiplied by the help and assistance of the heat of Fire, *&c.* Hereupon afterwards, it was styled by the Philosophers themselves, *The Son of Fire*; as appears by *Bernard de Tresne* in his third part, who calls *Gold* most

Lux.

A Child of the Son.

The Son of Fire

pure Fire So that if *Gold* be *Fire*, and *Fire* the *Child* of the Sun; and This, the *Vital Spirit*, which the Wind carries in its Womb, as *Hermes* witneſſes; then without doubt theſe three muſt be Brethren and all Children of the Sun.

And as the Sun in the Firmament of Heaven, is judged by Wiſe Men, to be incorruptible, conſtant, and perpetual, and by its Author is endewed with ſo many Embelliſhments, that Himſelf is ſaid to have placed his *Tabernacle* in it; for which cauſe it is called the *Form of Forms*, or *the Acid of Acids* (though it be not acknowledged for ſuch by the Vulgar, as neither is Gold) or the *Univerſal Form*, which in the work of generation infuſes all Natural Forms, and the ſeeds of all things into diſpoſed matter; for every individual thing hath hidden in it a ſpark of this *Light* of Nature, or *Acid*, whoſe Beams do Occultly influence the Seed with an Active and Moving Vertue.

So alſo Gold, being the Off-ſpring of the Heavenly Sun, is incorruptible, conſtant, and perpetual; of an entire Form, or a perfect Acid, and fixed, though, as I ſaid before, it be not owned as ſuch by the ignorant Vulgar: For unleſs it were a fixed *Acid*, how could the ſaying of Philoſophers be verifyed and fulfilled: *That which is perpetual makes things perpetual, and that which is fixed makes things fixed.* And therefore in the beginning *Light* was created over the Univerſe and contracted into this Body, being endowed with a vivifying Vertue and ſecret Fæcundity; I call it an entire or compleat *Acid* fixed and conſtant, which yet as *Raimund* ſaith, will make the empty Brain of one who hath ſeen nothing in Philoſophy, nor is ever like to ſee, to be altogether ſottiſh and ſtupid, Yet in my *Hippocrates Chymicus*, I have demonſtrated the *Acidity* of Gold, by two familiar Examples, which I ſhall now again recite out of my late *Hippocrates*, for a ſolid confirmation of the Truth, and the ſhame of all Zoiluſſes and Detractors; for if you dip the end of an Iron Rod in Gold melted or put to fuſion, the Iron in a moment will be turned into *Scoria*, or ruſt, as if it were

Gold a fixed Acid.

were burnt with kindled *Sulphur*; now unleſs Gold were Occultly *Acid* and pinguous, as common *Sulphur* is, it would never corrode Iron. Thoſe ſuperficial and vain Writers, who are enemies to the Doctrine of *Hippocrates*, cannot comprehend this fixed *Acid*, who had rather *ſeem* wiſe, than *be* ſo; much good may their vain applauſe do them: I envy them not, for they know no other *Acid*, but that which they dream to diſtill from Copper, which they falſly call *Spirit of Venus*; becauſe, out of ſloth, they deny that there is a fixed *Acid* in Nature; as if That in Copper were Volatile. *crotus Martis.*

Secondly, The pureſt Gold is diſſolved in *Aqua Regia*, inſtill *Alcaly* of *Tartar* into the Solution, which will drink up the *Acid* Spirits, even of the Gold it ſelf (my *Hippocrates Chymicus*, Chap. 7. ſhews the Reaſon, *viz.* Becauſe the *Alcaly* of *Tartar* embraces the Nature, even of Metals themſelves) and the Gold ſo drunk up, falls into a Powder of a Yellow Colour. *Crollius* teacheth this Preparation in his *Cordial*; ſo doth *Beguinus*, under its proper Title *Ceranuocryſon*: In this ſlight Preparation, Gold hath acquired a Fulminating or Thundering force, becauſe its *Sulphur*, being of its own Nature, acetous (to uſe the words of *Sendivogius*) is aſſociated with Artificial *Nitre*, which aſſociation is made in the *Alcaly* of *Tartar*, in the very moment wherein it is poured into the *Aqua Regia*, containing the diſſolved Gold. The manner how this is to be done, is laid down in *Hippocrates Chymicus*, Chap. 7. (for thoſe things which have been ſpoken elſewhere, and rightly by others, I will not unneceſſarily repeat;) ſo that Gold, unleſs it were *Acid* and *Pinguous*, as common *Sulphur* is, would never perform Sulphurous Actions with *Nitre*, as common *Sulphur* doth, with the ſame *Nitre* for Gunpowder. *Aurum Fulminans.* Gold is Sulphur.

If then the Sun, according to *Hermes*, be the Father of that Vital Spirit, which dwells in the Air, and Gold and Fire are its Brethren, the *Sons* muſt neceſſarily partake of the quality, diſpoſitions and properties of the *Parent*; ſo that it muſt needs follow by Fire Acid.

Reaſon and Authority (Experience alſo a ſtipulating thereunto) that the Vital Spirit of ours, the Child of the Sun, as alſo Gold and Fire are Acid and Pinguous; wherefore Acid and Pinguous is a moſt Ancient Principle, the Life and Fountain of all things: Writers give it ſeveral Names, as Fire, Sun, Gold, Spirit, Sulphur, Form, Humid, Calid, Dry, and many other Appellations, all which are Synonymous, ſignifying the ſame thing, but in different reſpects diverſifyed into ſeveral Names: But I both here and elſwhere, call it *Acid*.

This *Acid* doth occultly lurk in all Seeds, becauſe of its ſelf it is a moſt peaceable and quiet thing, in regard Nature hath implanted more of *Alcaly* than of *Acid* in every *Compoſitum* (except Sulphurs) and therefore it moves not unleſs it be excited, as we ſee plainly in Dough of Bread; which being excited by a very little Acid Ferment, and by Heat, is moved; and from that Heat and Motion the Acid is multiplied; and unleſs it were bridled and reſtrained by a heat, exceeding the inward (*i. e.*) by Artificial Fire, it would proceed to Vitality and produce Worms. Hence it appears, That *Natural* Fire, is quite another thing then *Artificial*; and that theſe Two differ much from one another: for the Natural or Soft Fire, according to *Hippocrates* (as I have ſhewed in Dough) doth Impregnate, Cheriſh, Infuſe Strength, and doth ſemblably perform all things in its *Leſſer World*, which the Sun, its Parent, doth in the *Greater World*: Hence we may obſerve, That the proud Name of *Microcoſme*, doth not belong onely to *Man*, for every Seed, every Worm, every Member, ſays *Hippocrates*, hath its Ventricle, and may be therefore called a *Microcoſme*. But *Artificial* Fire is an enemy to all Generation, it lives upon Prey and Rapine, it ſubſiſts by others Ruins, being the Deſtroyer of Life, and Enemy of Nature.

Natural Fire Acid.

A Microcoſme what.

Wherefore from the Sun, as from a Fountain, Natural, Acid, and Vital Light do flow forth; which, in reality are both one, only diſtinguiſhed by their Office.

face; for it is the Office of the *Acid*, to pierce into the inwards of Nature, whereas *Light* doth only discover the externals of things however the Beams of the Sun do operate both: So that the Sun is the first Natural Organ, by whose Access and Recess all the Operations of Nature are variously governed, intended and remitted. Hence the Ingenious *Cosmopolita*, *If there were not a Vegetable power in Sulphur* (that is a Pinguous Acid, and Child of the Sun) *Water would never be Coagulated into Herbs.* If therefore the Acid, flowing from the Sun, be infused into Matter (as for Example, *Mineral*) presently it receives the determination of the Nature and the Vertue of the *Mineral.*

The like may be said of other Animals and Vegetables too, as *Lully* speaks, and because this Natural Acidity is coupled with all Matter in the World, it hath therefore the Name of *Mercury* given it by the Wise. And though the Eyes of the Vulgar do daily behold this multiplication, and also incorporation of the Natural Acid; yet they do not understandingly consider it. Take the Mine of *Salt-petre* at *Padua*, for an Example, which is now exhausted, but in Five or Seven years time, will be filled again, for the Earth is its Nurse, as *Hermes* testifies; whence it is, That this *Spirit* assumes a Body in it, and becomes inflammable *Nitre.* The Mother of Nitre.

But I have a greater thing to speak off, There's an Island in the *Tuscane* Sea, commonly called *Little Elbe*, containing twenty *Italian* Miles in compass, very Rich in Iron, from which, that Metal hath been dug out for many ages, and is so to this day; so that not only the Mountains there, but [illegible]wo Islands also must needs have been dug through and exhausted; yet nevertheless Iron once dug forth in twenty years, renews again, and now more and better than formerly, because the Alcaly, or Mother of the Mineral there, is again exsaturated from the Vital Fountain; and takes the determination of Metal, so becomming Iron. Also the evacuated Mine of Vitriol in *Carinthia*, first being exposed to the free and open Air, and afterwards covered for some years, is again replenished; so that *Calid* most acutely *Elbe* the Mother of Iron.

Mother of Vitriol.

acutely Teaches, *That the Roots of things are in the Air.*

If these things are so, as Experience proves them to be True, why should not the *Acid* flowing down from the *Sun* into the Matter of a *Flint*, be multiplied in It, and be hardned into the fixation, constancy, and ficcity of the Flint? Since every individual hath treasured up in it a spark of the Nature of *Light*, by whose Beams the Body will be multiplied, as my *Hippocrates Chymicus* shews, Chap. 3. and afterwards, when the Flint by Artificial Fire is turned into *Lime*, or *Calx*, its *Acid* doth not therefore perish, which, since it is fixed by External Fire in Vegetables, as I shall shew anon, why may it not be so also in a Flint? So that it is a sottish thing to deny, that there is *Acid* in *Lime*: but these are vain Arguments and Subjects, forged in empty Brains: wherefore leaving such false Conjectures, I turn my self to the Lovers of Truth.

The Mother of Flint fixed and constant in the Fire.

Fixed Acid in a Flint.

CHAP. III.

Alcaly, *what it is? and how it is made, both by Nature, and by Art? and whence it had that name?*

AS in the former Chapter I have shewed out of *Hermes*, and by Experience, That the *Sun* is the Father of *Acidity*, now in this Chapter I will also demonstrate out of the same *Hermes* and the same Experience, That the *Moon* is the mother of *Alcaly*; and as the Acid doth not discover it self but to the Natural Philosopher, so also *Alcaly* comes not forth to view or light, unless it be detained by the Acid, which she loves: And first, I will alledge the Operations of Nature, and afterwards will Mechanically demonstrate how Art doth ape Them in her Imitations.

Thales,

Thales, *Heraclitus*, *Heſiod*, *Hermes*, as well as *Hippocrates*, have affirmed, That *Water* is the firſt matter of all things; The Writer of *Geneſis* ſeems to be alſo of the ſame mind: For all *water* is of a *feminine* nature, becauſe it contains and cheriſhes in it ſelf the Seeds of things, and clothes it ſelf with various figures. In the *Macrocoſm* 'tis made ſometimes Wine, ſometimes Vinegar, ſometimes *Aqua Ardens*, Cauſtick, Oyl, *&c.* In the *Microcoſm*, 'tis ſometimes Choler, ſometimes Milk, Sweat, Blood, Urine, *&c.* The root of all theſe is *water*, and that *cold*, which from the beginning was endued with a tenuious *Acid* or *Light*, that ſo it might be fitter to receive the form of mixed Bodies; for ſo, Fire is eaſily mixed with Fire, Light with Light, Water with Water; for unleſs it had been endued with this ſlender *Light* from the beginning, the Vital *Spirit* had never been able to aſſume a *body* in it: For our better underſtanding, I now call that *little body Alcaly*, Experience ſo directing me, See *Hippoc. Chymicus* chap. 19. The way which Nature uſeth in preparing that *Alcaly*, is taught us by that Noble *Polonian*, the Ingenious *Coſmopolita*, in theſe clear and expreſs words, *When Rain falls*, ſays he, *it takes from the Air, that Vertue of Life* (which in the Chapter aforegoing, I have ſhewed to be the Acid Spirit) *and conjoyns it with the Salt-nitre of the Earth*, becauſe the *Salt-nitre of the Earth, is like calcined Tartar, by its Siccity, drawing the Air to it ſelf, which Air in it is reſolved into water. Such a force of Attraction hath that Salt-nitre of the Earth, which alſo was Air, and is conjoyned with the fatneſs of the Earth; and by how much the more plentifully the Sun beams do then affect it, ſo much the greater quantity of Salt-nitre is made, and by conſequence a plentifuller crop of Corn is produced; and this is done day by day.* Thus far He, whoſe ſingle Teſtimony, culled out from many others, is a ſufficient authority for me to affirm, That the Acid Vital Spirit in the fatneſs of the Earth, by the Sun-beams, is fixed into Alcaly, which again covets to be ſaturated with the Acid Vital Spirit from the Air into Salt, which there is called *Nitre of the Earth*; the reaſon thereof will more clearly appear in the progreſs. Hence it is, that he

Alcaly in Water.

Alcaly the Child of the Sun.

ſays,

The Child of the *Sun* loves his Sister *Alcaly*.

ſays, in another place, *That this Spirit hath a Sister* (Alcaly) *which it loves, and is again loved by it, for it is ſo it as a Mother.* What can be more clearly held forth for the preparation of Alcaly, out of the Acid Vital Spirit by the Operation of Nature? I add, That if this Spirit be ſhot down out of the Air upon the Earth by Rain, then it muſt neceſſarily fall down alſo on the Water, and the ſame Sun-beams, which by Reverberation do fix it on the Earth into Salt-nitre of the Earth, do in like manner fix it in the Water, if not into Salt-nitre, yet at leaſt into Natural Alcaly; with which all waters do abound, except ſuch as are diſtilled from Cephalick Herbs: the reaſon whereof you may ſee in *Hippocrates Chymicus*, chap. 19. and in ſome places they fix it into Sea-Salt, other where into Vitriol, and ſometimes into Mineral, according to the diſpoſition of its Mother; as I have alſo ſhewed out of *Lully*, in the fore-going Chapter.

Alcaly in Water.

Regeneration of Plants proceeds from Hippocratical Learning.

Upon this foundation proceeds the ſpiritual repreſentation of Plants, concerning which, ſee *Hippoc. Chym.* chap. 29. If any one doubt of, or deſire to know its Inventor, let him conſult and weigh this Ancient True Philoſophy, and the ſincere Studier of Natures Secrets, maugre the Brawls of Scolding Detractors, will ſoon obtain his deſire.

As concerning the Ignorant, either Allowers or Detractors, who write without any ſure foundation, I am not ſolicitous about them; for I know that Calumny (which is not in a Man's own power to avoid) leaves a guilt on him that caſts it; He, againſt whom it is directed, being innocent and faultleſs: Nay, nothing is more pleaſing to an Honeſt-man, then to undergo Reproaches for love of Vertue; for it is undergone in this caſe, with Incredible Pleaſure and Alacrity, and being never long-lived, It again returns of its own accord without any labour to its Author: But to return,

Alcaly in the Earth.

That *Alcaly* is found in the Earth, Experience confirms by the Extraction of it, becauſe a *Volatile Alcaly* is drawn and ſublimated out of Earth, which hath not yet attained any conſtancy; whence, not enduring to be ſolitary and alone, it ſtrives to avolate into the Air.

So,

So, That nouriſhing *Alcaly* is made out of Water, *Paracelſus* proves by the accretion of a Flint in a Phyal-glaſs; for *water* is the Liquor and Root of all things, as *Hippocrates* witneſſeth in his Books of Diet: *Fire*, ſays he, *moves all things, but Water nouriſhes all things.* Hence *Lactantius*, *Water is all things*: *Democritus* alſo was not ignorant of the Vertues of Water, who therefore affirmed that Truth was hid or immerſed in a Well: So *Hermes*, *Water is ſuſceptible and producible of Nutriment in Men and other things, and without Water, Nature operates not*: See *Hippoc. Chym. chap.* 19. Alcaly in Water. Water doth Nouriſh.

For confirmation of my Aſſertion, let us hear the Noble *Coſmopolita*; *Nature*, ſays he, *knows how to produce fruits in the Earth, out of Water, and from the Air to ſupply them with life*: Which is as much as to ſay, unleſs Its ſiſter (*i. e.*) *Alcaly*, were in water, which this Spirit loves, it would not ſubſiſt of it ſelf, becauſe it cannot be alone, as *Hippocrates* informes us; and by conſequence it would produce nothing, but return into its own Soyl and Countrey.

Hence it is that *Hippocrates* again ſays, *De Naturâ pueri*, many things do happen out of a few, becauſe all things produced on the Earth, do Extract a more copious vertue from the Earth, than they brought with them from their Parents or Originals: 'Tis the ſame thing which *Coſmopolita* ſaid before for the generation of *Alcaly*, to which he adds Water, coagulated by the force of Vegetable Sulphur into Herbs; where it is to be obſerved, That unleſs this Spirit or Sulphur (call it as you pleaſe) did find ſomething in Water, which it loved, aſſuredly it would never enter into it, and would coagulate nothing; for if Water, by the force of Vegetable *Sulphur*, be coagulated into Herbs; the ſame Water by the vertue of Mineral *Sulphur*, muſt be coagulated into Minerals: and in like manner the ſame water by the help of Animal *Sulphur* into Animals: whence of neceſſity it muſt be Nutritive, if it ought to undergo Coagulation elſewhere.

So that Common Water is that Catholick and Univerſal Wine, which Animals, Vegetables and Minerals do drink, each of them after their own peculiar manner. A Catholick Wine.

And therefore to deny that *Alcaly* is in Water, is to fight againſt the graveſt Authors, againſt Reaſon, and againſt Experience. And they which in like ſort deny Water to nouriſh, gain nothing but univerſal Scorn for their labour; but let us hear *Hippocrates* ſpeaking in his Firſt Book of Diet, againſt thoſe who deny water to Nouriſh, and to be Coagulated by the vertue of *Sulphur* into Minerals, Vegetables, and Animals, yea into Humane Bodies themſelves, ſeeing Nature acts every where alike. *In thoſe*, ſays he, *where Fire is overcome by the preſence of Water, ſome call ſuch perſons Sottiſh, others Amazed Ones, Stupids or Dolts; which Temper is a certain duller ſpecies of Madneſs: Such perſons do Weep and Wail, when no man troubles or ſtrikes them; they fear things not to be feared, and are ſadned at things not at all belonging to them, and do imagine ſuch things as Wiſemen would never do.*

Wherefore it is good to Purge ſuch troubled Brains with Hellebore, *provided* Anticyra *have enough to do the Feat*: Thus ſpeaks *Hippocrates*, againſt thoſe who deny that Water doth Nouriſh.

Hitherto I have demonſtrated out of the Shop of Wiſe Nature, how the *Child of the Sun*, being Reverberated by the Sun-beams, is fixed into *Alcaly*, and how That *Alcaly* doth again inceſſantly Attract the *Child of the* Sun, and ſo they are both condenſed together. To this Natural Operation, I will now ſubjoyn That which is Artificial, that it may appear how Venerable Antiquity did endeavour to imitate Nature as near as was poſſible.

Art therefore takes Vegetables of all ſorts, Wood, Shrubs, Chips, Loppings, Leaves, *&c.* all green and freſh (whoſe moiſture here is inſtead of Rain:) if it be Wood, young Shrubs, or Loppings, which are made uſe of, They may be burnt in the open Air, or in a Chimney, and ſo without flaming out, be reduced to Aſhes, leſt that which we ſeek for, ſhould return by the motion into Air, or its own Country. If they be Herbs full of Juice, they may be burnt to Aſhes in a fired and lighted furnace (Fire here is inſtead of the Sun Beams, which reverberates the Acid of Vegetables into Alcaly) which, afterwards are agitated with a quick

quick flame in a reverberating Furnace, fit for this purpose, till they begin to threaten fusion; a sure Argument that the Acid is shut up in the Alcaly, and then they are called *Alcalizate or Pot-ashes*; out of these Ashes, by means of Common Water Salt, is elicited by Lixivation, then the Water is exhaled, till the Siccity remains, which is called, *Fixed Artificial Sal Alcaly*: This Salt, having almost lost its form, remains for the greatest part a *Vacuum*; and therefore being impatient of inanition, it again desires to be saturated with the Acid into Salt, that it may fulfil the course of Nature; as I have shewed before out of *Cosmopolita*. And as Nature doth incessantly and daily infuse an Occult Vital Acid out of the Air into the Alcaly made by her, both of which do afterwards (the heat of the Sun concocting them) gradually rise up into Corn and Fruit; so also, Art, in imitation of Nature, doth impregnate her prepared Alcaly, lest it should wax barren, with an Occult Acid; as for Example, Oyl, Fatness, *&c.* and by a continual heat doth by little and little digest them, till it assurge into Sope of a Salt taste; or else it mixes it with things more fixed, either White Sand, or Powder of Flints, which mixture, being agitated in a stronger Fire (*viz.* of Fusion) rises up to Glass, which must needs be of a Salt taste, because it is made of the Acid of Flint and Fixed Alcaly; yea, Alcaly saturated with so much Acid, as to make it sufficient for it self, is turned into *Salt*; and if the Alcaly be not saturated with Acid enough to dissolve or slack the Flint, then the Alcaly overcomes the Acid, and the Glass attracts Humidity from the Air, by means of the empty and thirsty Alcaly, and so chinks and is broken. Hence *Zoar* says, That *Glass* may be made out of any Herb, *viz.* when it is Alcalized, as my *Hippocrates* shews, Chap. 4th. and 5th.

Artificial Alcaly.

Alcaly with Oyl is made Sope.

Alcaly with Flint is made Glass.

These things being understood, we are again furnished with Arguments against Those who deny, That there is a Fixed *Acid* in Nature; and as, when the *Alcaly* exceeds the *Acid*, the Glass chinks, and contracts

Fix'd Acid.

ſtaws, ſo becoming uſeleſs; ſo alſo (as I have ſhewed above out of *Hippocrates*) thoſe perſons in whoſe Brains Water exceeds the Fire, do become ſo ſtupid and dull, that by reaſon of their darkning humidity, they can perceive no Fixed *Acid* in Nature.

Deſtruction of Glaſs.

Now *Glaſs* is deſtroyed by the ſame Fixed *Alcaly* of which it is compounded and made; a Poſition contrary to Thoſe who deny, *That there is no* Alcaly *like to* Nitre; then which, nothing can be ſpoken more abſurd.

But tis no wonder, If ſlight Doctors produce light Argumenrs. Therefore let more parts of *Alcaly* than

Glaſs made Liquor.

of Glaſs be melted together into one lump, which, being expoſed to the Air, is wholly reſolved into Liquor; *for out of what Glaſs is made, into That, and by That, it muſt needs again be reſolved*; as *Ariſtotle* rightly Teaches. Pour *Mineral Acid* drop by drop on this Liquor, until the hiſſing noiſe ceaſe, and the *Alcaly* be ſaturated into a Salt taſte or ſapor, and the powder of Flints ſinks to the bottom. Such Endimions, who think themſelves never ſecure, ſometimes think that this powder, taken by the Mouth, doth generate Milk; and ſometimes they imagine it, though taken the ſame way, to be a very pernicious thing.

Our Anceſtors tell us the way of making this powder, *viz.* That Red hot Glaſs ſhould be quenched in the Aſhes of Bean Stalks; which ſpeech, though it be not improper, yet it is laughed at by the *enſlaved and mancipated vent*; becauſe they do not firſt teach how to make a Lie for the quenching or extinction of Glaſs: as if *Rhacis* had not expreſly taught us, That the Sayings and Writings of Philoſophers are always to be underſtood according to the poſſibility of Nature, and not according to the ſimple ſound of the Words; for to take notice of every minute thing, to ſuch as are Skilful in an Art, would be too long and tedious. Now the Word *Quench*, doth neceſſarily preſuppoſe *Liquor*, as clearly appears out of *Rhaſis*: but my Anſwer is this, That the Sayings of Philoſophers are hardly underſtood by thoſe, who like vain perſons, ſeek for praiſe in Critical Gloſſes, having

been

been never enformed in the Operations of Nature, but have ſpent their time in collecting Receipts here and there, and Thoſe not well underſtood: And this may be the cauſe, why it is not given to Plebeians and Vulgariſts, to diſtinguiſh Things; as will more clearly appear hereafter.

After that Art in imitation of Nature, hath extracted Alcaly out of Vegetables, it preſently judges, that Alcaly muſt alſo neceſſarily lie hid in the Mineral Family; eſpecially *ſince Nature is alike in all things*: wherefore It begins to burn and calcine Flints, with a naked Fire, until part of the Aliment be waſted (as it did in the Family of Vegetables;) but not being able, by ſimple Water, to extract Alcaly out of them, when they are calcined, becauſe the Fixed Acid periſhed not in the calcination, but again apprehended or catch'd hold of its Siſter, *viz.* Fixed Alcaly; and ſo both of them were concreted into a rocky ſubſtance: therefore ſhe begins to mingle Lime with three parts of the Alcaly of Vegetables, that ſo the Acid of the Flint, with two parts of Alcaly, might aſſume a Neutral Nature, and by the help of the third part of Vegetable Alcaly, one part of the Alcaly of Flint might be elicited; *for like hath an eaſy ingreſs into like*, as *Hippocrates* teaches, *de locis in homine*; and ſo, that moſt powerful Alcaly for making of Sope, hath been extracted out of the Family of Minerals, as is more largly declared in my *Hippocrates Chymicus*, Chap. 3. and 4.

Flint is made Alcaly.

Alcaly of Calcin'd Flint.

Alcaly for Sope.

Moreover, the word *Alcaly*, is not new or lately vain gloriouſly introduced by Me; but it was invented heretofore by Philoſophers and Myſterious Sages, for the diſtinction not only of Things, but of Salts, working in a way contrary to Acids. For *Alphidius*, an Ancient Philoſopher, in his Book Entituled, *Aurora Conſurgens*; Chap 12. of Mineral Things, ſaith, *As Sal Alcaly is extracted from unſlaked Lime, or Pot-aſhes, or from Calcined Tartar it ſelf, by means of a convenient moiſture, until nothing remains of ſharpneſs; ſo alſo our Salt*, &c. The ſame thing is affirmed by *Senior*, a grave Philoſopher and Studier of this Ancient Science, *De tribus luna-*

Alcaly what it is.

Iunæ imaginibus. These things, with what I have before alledged out of the ingenious *Sendivogius*, may ſuffice to prove, That Salt of Tartar, of unſlaked Lime, and of Pot-aſhes, and ſuch as are of the like Nature, are rightly called *Alcalys* by the skilful; and are indeed *ſuch* (and not meerly Salts, as ſome ſottiſh Doctors do inſipidly affirm:) For as the Natural Alcaly of *Sendivogius* attracts to its ſelf, out of the Air, a Spirit Occultly Acid to our ſenſes (let it ſuffice to have hinted this once for all) is impregnated by it, and they both aſſurge into Crops of Corn and Fruit; ſo alſo theſe Artificial Alcalys, being empty, are impregnated with all ſorts of Acids, as the Artificer pleaſes; and when they are ſaturated, they take their determination from the Acid, according to the property and nature of the innate Calid, as I ſhall anon ſhew mechanically: So that it is not ſufficient to dream, that Alcaly of Tartar is purely Salt, but it becomes us to lay down the clear and demonſtrable grounds of this Doctrine, otherwiſe it will obtain no credit in the School of Truth, but will be proſcribed and hiſſed out, as a wicked and illuſive thing.

Let me now produce a Clauſe out of *Botanicks*, concerning the Herb *Kaly*; for they call the Salt of this Herb *Alcaly*, and commend it for Vitrification; neither did I ever read that Sea-ſalt, or Pit-ſalt, were ever uſed for making of *Glaſs* or *Sope*; becauſe they have been found by experience to be ſaturated and impregnated with Acid, and not empty; ſo that, They can imbibe nothing, but their own proper Acid; yea, they difficultly let go or part with their own Acid: and unleſs the Alcaly did abſume in it ſelf the Fixed Acid part of the Flint, *Glaſs* could never be made; which is proved by the ſupernatant fatneſs, which is no longer Alcaly, but called *Fel vitri*, which is unfit for Vitrification; for *This* being ſaturated with Fixed Acid, from the Flint, by reaſon of its Saltneſs, repreſents the nature and appearance of Trencher Salt, and therefore is onely good to be given to Horſes and Cattel to ſharpen their Stomachs to their Fodder, where Salt is very dear.

Fel Vitri.

dear. And ſo, the Salts, which abſorb the Acid, are called *Alcalys* by the Ancient Philoſophers (and ſuch they are) to diſtinguiſh them from that common Trenchet Salt which we eat: In like manner, I ſhall alſo call them *Alcalys*, having Authority, Reaſon, and Experience on my ſide (let *Momus's* bark never ſo much;) wherefore in a Flint, conſtant in the Fire, and fixed, there dwells Alcaly and Acid, a *Leſſon*, which the *Deans* and their *Fellows* never yet Learned; but I ſhall demonſtratively ſhew that the Acid in the Flint is made *Glaſs*, and again, that out of the Alcaly of the ſame Flint is made *Sope*; and both thoſe Principles by Alcaly alone, are divided into two diverſe ſubſtances, very neceſſary for Humane uſe; and unleſs there were *Hals* and *Cheo* (*i. e.*) melting of Salt, whence *Alchymy* hath its name, men muſt neceſſarily want both *Sope* and *Glaſs*; ſee the Preface to my *Hippocrates Chymicus*.

Wherefore the Acid of Flint, which of it ſelf is of difficult Fuſion, doth animate the vacuous Alcaly, which is of eaſy Fuſion (for unleſs the Alcaly were vacuous, it could not imbibe the Acid of Flint) and both Theſe by colliquation, turn into a dark Maſs, which by reaſon of *Fermentation*, of its own Nature caſts forth, a Salt froth, which being ſeparated, is called by the Skilful *Fel vitri*. The Maſs by little and little is clarifyed into tranſparent *Glaſs*, ſo that, That which *erſt* was a *Vegetable*, is *now* by the Spirit, or Soul of the Flint, turned into a *Mineral*, and a rocky or petrous diſpoſition and nature (*i. e.*) Glaſs: which conſideration is of great weight, For the Soul of the Flint goes forth and enters into the Alcaly (as the *Pythagorians* ſpeak) or the Vegetable Soul goes forth and re-aſſumes the Mineral Nature, and the Vegetable is animated with a Rocky Indoles, ſo that for the future, no Fire or Acid Liquor can overcome or hurt it; whence *Raimund* whiſpers to his followers, *Take away its Soul, and reſtore it to it again*: and though the operation of which he ſpeaks, is not properly concerning vitrification, yet it is of no leſs value, ſince Nature in every thing is alike, as I ſhall ſhew in this Book, to the Prudent and Lo-

Flint and Alcaly are fermented into Glaſs.

ver-

ers of Truth: as for the prophane Vulgar, which neither is, nor will be capable of the Study of this Ancient Medicine, I matter them not, I ſtudy to pleaſe but a few, for that which pleaſes the many, is not without ſuſpicion; and it is the Advice of *Pythagoras*, *to follow the feweſt, if walking in a right path.*

Alcaly a Female. So that *Alcaly* is as the Female, in reſpect of the *Acid* (the Child or Male of the Son) and is its Siſter, which it loves, and is reciprocally loved by it, as *Coſmopolita* ſpeaks; moreover, it is as the *Moon*, which is impregnated with Light and Vertue by the Child of the Sun, whence the *Moon* is the Mother, as *Hermes*, and after him, other Interpreters of Natures Receſſes and Secrets have phraſed her; for they call their Alcaly *Luna*. So that the Anonymous Revealer of Natures Myſteries, ſays rightly, *The heat of the Female anſwers to the Terreſtrial heat, whilſt it putrifies, cheriſhes and prepares the ſeed; but the Fire implanted in the ſeed, being the Child of the Sun, diſpoſes the Matter, and informes it, ſo diſpoſed.*

If then the *Alcaly* receives, putrefies and cheriſhes the Acid (the Child of the Sun, that This again may ariſe into a new and clarifyed Body (as I have ſhewed in Glaſs) it muſt neceſſarily perform the Office of a *Mother*, and ſo be vacuous; if otherwiſe, it muſt be impregnated by the Child of the Sun, as *Hermes* and Experience witneſs. Hence *Hippocrates*, in his firſt Book of *Diat*, ſighing at and lamenting the ignorance of Thoſe, who amongſt their fellows boaſt themſelves *Wiſe Men*, ſays he, *know not how to conſider and inferre obſcure things out of ſuch as are manifeſt.* Therefore to

Alcaly of Tartar. diſtinguiſh it from the Acid of Common Salt, it is called *Alcaly*, not only by Philoſophers, but alſo by Mechanical Glaſs Men and Sope-boilers. If therefore *Alcaly* be vacuous, and *Acid* an imbiber, as I have ſhewed, How, and by what reaſon, can the Alcaly of Tartar be proclaimed to be purely Salt? and how can it be approved for ſuch? Surely ſo to affirm, is meerly a monſtrous thing, and an Old Wives Tale, full of filthy ignorance; invented and approved only by ſhallow heads,

heads, but exploded and derided by the intelligent and learned. Beware therefore, O ye lovers of Truth, of ſuch couzening Chapmen, the matter is far otherwiſe then thoſe boaſters do vain-gloriouſly pretend. To *Me* they can do no harm, but I write this for the ſake of young and unwary beginners, that they may not give up themſelves to falſe Doctrines, which would lead them out of the way; but that they may know for the future whom to avoid, I conclude therefore, with *Hippocrates*, That all things in the world are conſtituted of *Fire* and *Water*, or of *Acid* and *Alcaly*; of theſe Two Inſtruments, all things in the *Univerſe* are made up (as alſo is the Ancient Phyſick of our fore-fathers) in which yet a Third is inſeperably included; which is therefore hinted to us, under the name of *Sal Philoſophorum*: whence They called all bodies compleatly mixed of *Acid* and *Alcaly* (*viz.* when the Fire did not overcome the Water, nor on the contrary) *Salt*. Hence aroſe that ſaying, *In the Sun and in Salt, are all Natures Productions*: yea, all the Grace, Ornament, Delight and Contentation of Humane Life could not be expreſſed in a fitter word, and therefore delightful Elegancies, which offend none, are called *Sales*, nay, the appellation of *Graces* is alſo given to it. Hence St. *Paul*, *Col.* 4. *Let your ſpeech be always ſavory, ſeaſoned with Salt, adminiſtring grace*, &c. And the Scripture, not without Reaſon, often takes *Salt* for an Emblem of *Wiſdom*, intimating thereby, that the fundamental Knowledge of the Nature of *Salt*, and of its compoſition of the Two Inſtruments of Nature, is of great Moment. If therefore determinated Common Saline Matter, *viz.* Alcaly, being informed by the Acid or Child of the Sun, as well in Scripture as in Moral Philoſophy, be called *Salt*, and the denomination of *Salt* be given to it alone, why ſhould any defraud the higheſt Maſculine, being innocent, and which may be likened to the Sun, and rob it of its proper Name: Receive therefore from me the *Salt* of *Wiſdom*, and beſeech the Lord to give you *all*, the Spirit of diſcerning, for no age is too late to learn Truth and good Manners. Let Old Age bluſh, which

Sal Philoſophorum.

cannot amend it self, yet ſcorns to learn; for my part I am willing to inſinuate and to be complaiſant (as *Ceſar* was) that Men may attain to a better Underſtanding. Hearken therefore attentively, and give ear to the difference betwixt vacuous *Sal Alcaly* and *Common Salt*, which Wiſe Men, by reaſon of its perfect mixture, have compared with the *Sun*.

CHAP. IV.

Trenchar-Salt, or the Salt which we eat, how much it differs from Vitrifying and Saponary Alcaly?

Salt a known thing.

The Praiſe and Renown of Trenchar-Salt is ſpread over the whole world; ſo that in Apologizing for it, I undertake as it were the defence of the Sun, againſt a ſwarm of Flies, endeavoring to eccliſe its Light: Salt, becauſe it is ſo neceſſary an Element for Mortals, that Mans Life cannot be ſuſtained without it, therefore Nature exhibited it to us, brought to full perfection, and requires not from us (as in our other Acquiſt) any Uſtion, but only that we dry it from its aqueous Humidity; whether it be Sea Salt or Salt from Pits. Principles, equally poized, do concur to its mixture, which is made in Natures Shop; ſo that venerable Antiquity hath determined, *All Natures Perfections to be in the Sun and Salt*; and it is called by *Helmont*, and that on good ground, the *Chief of Salts*, and is the Armoniack amongſt them all; yet notwithſtanding it is praiſed from the Countrey, whence it comes, as *Dioſcorides* hath it: See *Hippocrates Chymicus*, Chap. 2.

Alcaly unknown to moſt.

But the Fame of Alcaly hath not yet reached to all People, becauſe Eſſentially and Corporally it appears not in Nature, unleſs it be made by Art and Uſtion, as well in the Animal as Vegetable and Mineral Kingdoms;

doms; yet with this difference, that some Minerals, not equally mixed, contain more of Alcaly than Acid; Sulphur, Gold, and Meat-Salt being excepted, which have more of Acid, as I have shewed. Hence it is, that the Ancients have Writ, that this *Virgin* hath three Fathers, *viz.* Nature, Fire, and the Philosopher: but here we must Note, that no man by the art of Ustion, in any one of Natures Kingdoms, can prepare any Alcaly absolutely Pure (*i.e.*) deprived of all mixture of the Acid whatsoever; he that seeks to do it, will lose his labour. Whence *Cosmopolita*, *Burn*, says he, *Sulphur from incombustible Sulphur, and from its Soul*, whose Grain and Ferment, indeed *Mercury* hath in it, as much as is sufficient for it self; but make, that it may be sufficient for other things too.

Artificial Alcaly never Pure, or destitute of any Form.

Enough now hath been spoken for the convincing of Those that deny the principles of this Ancient Art, *viz.* That *Mercury* hath no Sulphur separable from it: 'Tis altogether vain, what some Masters and Writers of Vanity have thought (says *Geber*) for I have seen that It doth emanate from it, *&c.* Experience also confirms the same.

Common Salt is of a Salt-acid taste (*i.e.*) the Acid is prevalent in it; therefore it is incorruptible (if the Salt have lost his savour, wherewith shall it be seasoned?) Hence being moderately mixed with Meat, it conciliates a grateful taste to them, and excites Appetite.

Sal-Alcaly is contrary to a Salt-Acid taste; hence if it be mixed, though but moderately, with Meats, it gives them an unsavory taste, and blunts the Appetite.

Common Salt, by reason of its Acidity, preserves Flesh and Fish a long time from Putrefaction, and draws out and attracts from them the Volatile Alcaly, which by a Retort is again easily separated, as *Hippoc. Chymic.* teaches Chap. 14.

On the contrary, *Sal-Alcaly* doth consume the Acid, and promotes Putrefaction. Common Salt doth imbibe nothing of Acid, and therefore being dryed from its Aqueous Humidity, and cast into Butter of Antimony, it disturbs it not; *Sal Alcaly* being dryed, and cast into the

ſame Butter of Antimony, is ſo far from not diſturbing it, that in an inſtant it quite deſtroys it; becauſe it drinks up the Acid Spirits, and the *Antimony* falls into a white Powder.

Common Salt being mixed with the Quadruple of *Bole Armonick*, and diſtilled with an open Fire, yields an Acid Liquor.

Sal Alcaly mixed and diſtilled with the like quantity of *Bolus* with an open Fire, yields a bitteriſh Liquor, by reaſon of the *Bolus*, Inſipid and Aqueous *per ſe*, as *Hippoc. Chymic.* ſhews Chap. 10.

A falſe Proceſs of Volatile Salt of Tartar.

In this place I deſire the equal Reader to take notice, That the Proceſs concerning the making *Volatile Salt of Tartar*, inſerted into the laſt Edition of the *Reformer*, I had almoſt ſaid *Deformed Auſpurgh*'s Diſpenſatory, *f.* 247, was ſtolen out from my above-named 10th. Chapter of *Hippocrates Chymicus*: And after they had ſtript it of things unknown to them (as I can ſhew) what further? they mutilate the Text, then load it with Calumnies, pervert Sentences, and prove manifeſt Falſaries. *God Almighty* curb ſuch Plagiary, Falſified, Stoln, and Deformed Labours, which darken the minds of the Studious. In that fore-cited 10th. Chapter, I did Experimentally Demonſtrate, That all things did conſiſt of *Fire and Water*, and that Water was the Baſis and Root, not only of Sweet and Inſipid, but alſo of Igneous Vertues, and of Cauſtick things, as of *Aqua Fortis*, *Alcalyes*, *Salts*, *Oyls*, *Vinegars*, *Hot Waters*, and of all things, in which the Acrimony of Fire doth prevail. I ſay, Water, and that cold, is the root of all thoſe things; for Nature impreſſes the Vertues of Her things upon a moiſt Element; Wherefore Moiſture is the firſt Subject of Nature, upon which Her firſt Labour is ſpent, as I have ſhewed in the Third Chapter of this Book, and hereafter will make clear by plain and evident Examples. I ſay, for this end my *Hippocrates Chymicus* in the fore-cited place, reduced many things; as alſo *Alcaly* of *Tartar* by Solution and Coagulation, into Simple Elementary Water, of no Taſte or Smell; but Fire, and the Child of the Sun (for whoſe ſake the Dance is made in that Operation) returns to its own Country,

Country, and that for this Cauſe, *That Man may not find out the work that God doth*, *Eccleſ. chap.* 3. *v.* 2. See alſo *Hippoc. Chymicus* Chap. 18. Theſe Surreptitious Doctors have not only ſtoln out this my Labour, Sweat, and Travel, to advance their own Praiſes, but have alſo eſſayed to reproach the Author with infinite Calumnies, and to ſuppreſs the Truth; yea, they boaſt that this Simple Elementary Water is *Volatile Salt of Tartar* in theſe Rhodomontado words:

And by this means at length, Courteous Reader, *thou mayſt be ſure, That the Vertues of Salt of Tartar have paſſed through the Lembick, and That, thou haſt, in ſuccinct words, received a great Secret, deſtinated to thy own and neighbours Health, which uſe happily.*

Conſider, Friendly *Reader*, whether any thing could be more plauſibly deviſed by their *Mightineſſes*? What? to rob an Author, and afterwards to Defame Him? and then to depreſs and detract from the clear Truth? and that they may procure Fame to themſelves amongſt their Companions, with a lofty Brow to Venditate moſt *Simple Water* for *Volatile Salt of Tartar*, not only to the prejudice of ones Neighbour, but to the reproach of Phyſick itſelf; which would certainly be the Nobleſt of all Arts, unleſs it were thus treated by ſuch ignorant Brains which are far more vacuous and emptie than *Alcaly*. Loe, this is the cauſe why now it is reputed the *vileſt* and meaneſt of Arts by the Vulgar. What Candid Perſon, Ingenious *Reader*, can be pleaſed with ſuch Actions, or gull'd with Preſcriptions ſtuffed with manifeſt Vanities, under the pretence of Phyſick? Heretofore, he that taught Falſities was accounted Infamous and a *Knave*: Hence *Cicero* ſpeaks, *Pro Roſcio, A man may eaſily be deceived by a Knave*. Their Brain is pre-poſſeſſed with ſo many Abſurdities, that they have loſt their Remembrance, and have forgot, That Water drawn from *Alcaly* of *Tartar* is moſt Simple; neither are any of thoſe Vertues radicated in it, contained therein, which *Raimund*, *Baſilius*, *Hollandus*, *Helmont* and others Aſcribe to *Volatile Salt of Tartar*. Doth this Water which you have ſo Diſtilled from *Alcaly* of *Tartar*, diſſolve a Metal, or at leaſt the Stones of *Crabbs*, by a true Solution?

tion? Can only four drops of this your Diſtilled Water, taken by the Mouth, augment the Vital Spirit when it is weak, with incredible Vigour? To which I add, that Volatile Alcaly may be made, not only from *Tartar*, but from all Cephalick Herbs, which contain *Alcaly* in their Aſhes (*i. e.*) without Clavellation. So a Friend of mine extracted Volatile *Alcaly* out of *Lillye Convallye*, which was very Reſtorative: Yea, I my Self have prepared the ſame (of no leſs Efficacy in *diſſolving*) from the outward Rinds of Walnuts. But, *Baſilius*, *Hollandus*, *Helmont*, and others do extoll *Alcaly of Tartar*, becauſe it eaſily is conjoyned to and makes a Coalition with Fire of its own nature: Yet theſe ridiculous *Maſters* do ungratefully rail upon *Helmont* too, as well as other Learned Men, falſly accuſing *Him*, for not diſcovering the way of Prepararing this Salt: But what need have your *Maſterſhips* of *Helmont*'s help? *Since ye your ſelves are ſure that the Vertues of Salt of Tartar have paſſed through the Lembick, and that you have obtained a great Secret?* Why do you reproach a Man who hath faithfully ſhewed you the right way? as I have done in my *Hippoc. Chymic.* in three places, and alſo in this Tract; clearly diſcovering the Preparation of this *Alcaly*; which, if you do not underſtand, yet do not Revile, but rather blame your own ignorance, and afterwards apply *Cupping-Glaſſes*, and a ſharpe Suppoſitory, leſt your envious Bowels ſhould burſt aſunder.

But nothing is more ridiculous than that which is whiſpered into the ears of his Followers in the ſame Text, *I am induced by this motive to reveal this to thee, leſt I ſhould ſeem to be enviouſly affected againſt many Writers of our Age.* *Plautus* would ſay to ſuch a man *Aplauda es nequior*, Neither is that leſs Jocular or Ridiculous, which (in the above-cited place) they demand, *viz.* that the curious Inveſtigations of Learned Men, for which they have taken pains, ſhould be openly and plainly diſcovered to ſuch *Maſters of Vanity*, who know not how to diſtinguiſh *Water* from *Salt?* as if it were not ſufficient that *Quid pro quo* were often enough preſcribed to *poor Patients*, but that they themſelves muſt likewiſe have an occaſion adminiſtred to Adulterate and Defame the Inventions of Phi-

Philoſophers? Do they not know that *Hippocrates* forbids it in expreſs words, and allows us to divulge only thoſe things which are known to Plebeians? For they do not underſtand the force and meaning of my words: Take this my Reduction of *Alcaly of Tartar* into *Water*, for an Example, they preſently, among the Unskilful, Vaunt This to be Volatile *Alcaly*; and do moreover commend it for a *Cordial* with their vain yet ſwelling words. By Theſe, and the like Fables, ſtudious Young-men are impoſed upon, under pretence of Truth, becauſe they are Licenſed and Approved by the Lofty Magnifique *Deans* and Profeſſors of Phyſick: Innocent Youth is eaſily perſwaded that Truth lyes in the bottom of ſuch Trifles, not knowing any more than their Maſters how to diſcern Truth from Falſhood. But what effect ſuch and the like things can have in an Art, is manifeſt by daily Experience; ſo that it is grown, and not without cauſe, a common Proverb, *Mentiris ut Medicus*; Which therefore of all the Philoſophers, would take pains to inſtruct ſuch an Indocile, Quarelſome, and Sluggiſh Rout? he cannot do it without doing great Wrong to himſelf, and contracting an indelible ſtain of Infamy to his Credit. Leaveing therefore theſe *proceſſes*, which come not forth upon the Stage without the laughter of Learned Men; I convert my ſpeech to the Studiers of Truth, and do affirm, That the Ancient Science of Phyſick doth not conſiſt in compiling of *Proceſſes and Receipts* here and there ſurreptitiouſly taken up, and perhaps alſo but ill underſtood (of which Perſons the Proverb ſpeaks true, To know, what?

Cum Charta cadit, tota Scientia cadit.

He that for their Knowledge looks,
Finds it not i'th'r Head, but Books.)

But in the true Underſtanding and Knowledge of Things by their Cauſes, as *Ariſtotle* hath rightly taught, *l.* 1. *Phyſic.* For he that knows Things by their Cauſes, is not only ſaid to have Experience, but to know and comprehend Them perfectly. This

is

is the Foundation of the Ancient Physick; and although all Receipts with their Exscribers, Subscribers, and Approvers, were utterly lost and perished, yet this Ancient Science would remain unmoveable; whose foundation I have faithfully discovered in my *Hippoc. Chymicus*, by familiar and common Words and Examples; but such putative and empty *Doctors*, by reason of the blindness of their minds, cannot reach to it (I call it blindness, seeing all Knowledge is Light, and Ignorance, Darkness) as being long since excluded from the Knowledge of the Truth: Enough now concerning this *disguised Elementary Water*. There are many such like trifles packed together in the fore-named *Dispensatory*, which do not only cast a blot upon Noble Physick, but do also redound to the Ruin of our Neighbour; *Things ill got, because not understood, will be as badly spent.* But these things requiring a Volume by themselves, I shall forbear further speaking of them at present, and return whence I digressed, Common Salt doth not wash out filth, therefore Sope cannot be made of it. Hence it was, that *Nausicca* the Daughter of King *Alcinous*, washed her Linnen out of a Fountain in the Sea-shore, as *Homer* notes, *6. Odyss.* which *Aristotle* rightly refers to the perfect mixture of this Salt, for seeing it hath no vacuity in it (as Alcaly hath) it can receive no filth into it self.

Sal Alcaly is vacuous, and by consequence imbibes filth, and Sope is made of it; because it absorbs the Occult Acid in the Oyl and Fat, which by a slow Concoction are converted together into Sope, of a Salt taste, as my *Hippoc. Chymicus* hath it.

Common Salt fortifies and strengthens living Flesh, it cures the Scab, Mangy, and other Diseases of the Skin, as the Sea-fishers can witness; yea being mixed with Oyl, it cures Scalds.

Sal Alcaly doth mortify and putrefy living Flesh, as Potential Cauteries do witness; and the History also shews, that it putrefyed a whole living Man in a moment, as it is mentioned in *Hippocrates Chymicus*, Chap. 4.

Com-

Common Salt with Sand, paſſes not over into *Glaſs*, becauſe it is ſaturated with Acid.

Sal Alcaly, with Sand, is melted into Glaſs, becauſe being deſtitute of Acid, it receives into its Bowels the Acid of Flint, and by Fuſion, becomes of a Rocky Nature; as I ſhewed before.

Common Salt, makes Nitre impure, Sal Alcaly, cleanſes Nitre from all impurity, as my *Hippoc. Chymicus* teaches, Chap. 8.

So we Read in *Holy Scripture*, every Sacrifice ſhould be ſeaſoned with *Salt*, but no mention at all is made of *Alcaly* there.

So that it is manifeſt, from the Circumſtances above-mentioned, That Meat Salt, or Common Salt; the Child of the Sun, and the Chiefeſt of all Salts, differs very much from Inane and Vacuous *Alcaly*; which therefore I have ſet one againſt another, that it may appear to the Learned and Curious, that there is not a grain of Salt in thoſe great Bodies of Innovators, who contend, That Sal Alcaly is a *Salſum*, and ſo do ignorantly perſwade their unskilful followers: For there are no more Salts in the Univerſe, than Acid and Alcaly; Acids are infinite, all which have one only Alcaly for their foundation, in which they ſubſiſt, and are incorporated, as I ſhall Ocularly demonſtrate in the 6th. Chapter: So that all Salts, and all Things which are in the World, may, by an eaſy method, be referred to Acid and Alcaly; therefore it will not be amiſs, yea pleaſant and acceptable, before I proceed, to ſubjoyn the Preparation of Medicinable Salts.

CHAP. V.

The Preparation of Medicinable Stals.

HAving ſhewed before, That there is nothing in the Univerſe, but Acid and Alcaly, of which Two, Nature compoſes all her works; to which yet a Third doth alſo inſeparably adhere, as by degrees will be manifeſted: I ſhall now proceed to confirm my Propoſition of Medicinable Salts; and to ſhew, what they are; becauſe I have not found Their Nature hitherto deſcribed by any Man, and therefore I think it worth my Labour, to transfer the True way of their Preparation, out of my *Hippoc. Chymicus* Chap. 21. to this place, which will likewiſe declare their Eſſence, and Nature. Moſt Wiſe Nature, in the 3. Chap. ſhews us the way, how her Spirit of the Air is coagulated and fixed, to wit, by Fire and Water (*i. e.*) by the Sun Beams and by Rain, for unleſs they both concur, the Spirit returns to its Original; which *They* find to be True, who endeavour to prepare Salts out of *dry* Simples, for, in *drying*, the greateſt part doth exhale; and by how much the dryer they are left, the leſs quantity of Salt is procured from them; leaſt of all, yea nothing, from rotten Sticks and Wood; which though with great Care you reduce into Aſhes, yet you can elicite no Salt from them; but on the contrary, the freſher and newer they are burnt, a greater quantity of Salt, will be extracted there-from. Therefore, for the Preparation of Salts, our principle Care and Study ſhould be, That the Herbs be freſh (ſee Chap. 3.) for then, in concremation the innate Acid apprehends the Alcaly, and the Alcaly abſorbs, or ſucks up the Acid, and they are both fixed according to the property of the concrete; but from that part (which flies away with the flame, and

Rotten Wood hath no Salt in its Aſhes.

and, not being ſufficiently bound in by the Acid, goes to Soot) you may eaſily extract Volatile Alcaly.

Let Green Wormwood be the Example, Take This, green as it is, and burn it in a Chimney or open Place (but Fumitory, or ſuch like Juicy Herbs, may be caſt Green and Freſh, into a Red Hot Furnace, and the Mouth-hole be ſhut, that it catch its Flame:) flaming out is to be hindered as much as we can, for it is ſufficient that it be turned into Aſhes, though but black; which Aſhes are further to be Calcined in a large Earthen Pot, and low, or upon a large Iron Plate, of a lifted up edge; Coals being kindled under, in the Wind Furnace, to the end that the little Door may be opened or ſhut, as there is need: The Aſhes are always to be ſtirred with an Iron Spatule, till they be very white. Note that the proceſs made this way is and muſt be more Sweet and Benigne, than that mentioned, Chap. 3. in the Preparation of Alcaly; for There the Aſhes are ſtirred and agitated with a quick flame, which are therefore called, *Clavellated*, or *Pot-aſhes*; but *here* the Fire muſt not touch the Aſhes, but they muſt be ſpread on a large Iron, or Earthen Plate, or Table, which muſt not enter the mouth of the Furnace (ſee the Contents of my *Hippoc. Chymicus*, in the above-cited Chapter.) Lay the Aſhes on a Linnen Acuminated Bag, or, if there be few of them, on Acuminated Paper, and pour Common Water on them, which, running through them, being pregnant with Salt, is called a *Lixivium*, or Lye; Coagulate this ſtrained Lye, with a quick Ebullition, in a Frying Pan, not greaſed in the Kitchin, and make it up into a Maſs, which, when it begins to thicken like Honey, you muſt continually move with a *Spatule*, and it will be dryed up into a Grey Powder, which you muſt preſently lay in a Pot not Glazed, with a Cover, (the little Door of the Wind-Furnace being ſtopped) and cover them with Small Coals, mixed with the Powder of the ſame Coals; leiſurely heat it, unto Brunity; not making it Red Hot, or melting it; when all is cooled, put the Salt into a Glaſs Veſſel, and diſſolve it in a ſufficient quan-

tity of Water, ſtirring it between whiles, with a Wooden Stick, till the whole be diſſolved: afterwards let it reſt for two or three dayes, when it is clear, pour it forth from the Lees, without much ſtirring, and in a Leaden or Glaſs Veſſel placed in Sand, ſuffer the Water to exhale without bubbles, till a Saline Cuticle appear: Then remove the Veſſel; and the next morning gather up the Splendent Grains of Salt; which are to be waſhed with clear Water, with a quick motion, and dryed; put the remaining Lye again into Sand, that the Water may exhale, as before, unto the Cuticle. Both theſe Salts are to be kept together joyntly in one Veſſel. It is to be obſerved, that *Salts* this way ſweetly prepared, do reſemble the *Craſis* of their Concretes, the reſt of the *Lixivium* being of an Urine-like taſte and ſtinking ſmell, is to be left for waſhing of Glaſſes. This is the eaſie and natural way to prepare Salts of Vegetables, which do never melt of themſelves, neither are of an ungrateful taſte; for they are compounded of their proper Acid and Alcaly by Concremation: A pound of Theſe Aſhes yields almoſt four Ounces of the pureſt Salt, but four Pound of the Aſhes of dry Herbs will ſcarce afford one Ounce of Salt.

CHAP. VI.

That the Seminal Vertue of all things is Acid, and that Acids *lead* Alcalyes ad Lubitum, *and that every Acid Liquor is a Solution of Acid-Salt in Elementary Water.*

I Have ſhewed before that Water would be coagulated by the force of *Vegetable Sulphur*, into That, of whoſe Determination *Sulphur* was: It is the property of *Sulphur* to be Occultly Acid and Pinguous, as I have ſhewed in Chap. 2. which in *Vegetables* is always Volatile.

Take

Take therefore either Wood, or Meal (whose Spirit these Magnifick Ridiculous *Masters* do proclaim and approve for *Acid Spirit* of *Sal Armoniack*) or any simple *Vegetable*, whatever it be; yea, or the very grains of *Kermes*, and Distil through a Retort the Pinguous Acid Liquor, which is called, and is, *Sulphur* of the Grains of *Kermes*; or any other *Vegetable* (which their Masterships hitherto were ignorant of) upon this Liquor pour *Alcaly* of *Tartar* (which answers to Water, the Fire being taken away, as my *Hippoc. Chymic.* teaches Chap. 10.) till the *Strepitus* cease; strain this *Compositum* through Paper, and dry it up by degrees into the consistency of *Honey*, and the *Tartar* of the Grains of *Kermes*, or, as some call it, *The essential Salt*, will concrete in it when it is cold: But if you desire to turn it into Pure Salt, heat it in a Pot not Glazed, scarce to Brunity, only that the exceeding Pinguousness may deflagrate; or else put it into a Retort, and distil the Oyl from the empty Cuppel: Dissolve the black Mash with Common Water, let the Solution rest for three days, till it be clear, then poure it out leasurely, and in a Glass Vessel placed in Sand, Exsiccate it to the *Cuticle*, and the next morning you may collect a Salt of the same Vertue, that the Acid, which you poured on the Alcaly, was off; so that the *Alcaly* is brought to the will and pleasure of the *Alcaly*. Tartar of *Kermes*.

As the Acid Liquor distilled from the Grains, doth Impregnate the Alcaly with its Vertue, which from thence receives its determination, so that it may be called, and is *Salt of grains of Kermes*; So also poure distilled Vinegar on the same Alcaly, as much as it can imbibe (*i. e.*) to Saturity; which you may know when the *Strepitus* ceaseth, and the smell of Vinegar breaths out: Coagulate the Impregnated *Alcaly* to Siccity, and though the Vinegar was distilled and the *Alcaly* of *Tartar* most Pure, yet the *Coagulum* is very Impure, Sordid, and Black, by reason of the Pinguousness of the Vinegar; which being separated, doth therefore catch or conceive Flame. Dissolve this black Mass in clear Water; let as much as is dissolved, rest for three days, then separate through Paper, the Pure from the Impure; dry the Pure again, as before,

and

Regenerated Tartar of Wine,

and you ſhall have *Regenerated Tartar*; Diſtil this out of a Retort, as we do *Tartar of Wine*, and it will afford an Oyl, more or leſs Fetid (according to the quality of the Wine, of which the Vinegar was made;) and a bitteriſh Liquor, ſuch as Common *Tartar* is wont to yield. The *Faces*, or *Caput Mortuum*, unleſs by the vehemency of the Fire it be turned to Glaſs, you muſt again diſſolve in clear Water, and ſtrain and coagulate it into true *Alcaly of Tartar*, as if it were left of the Common; So that the ſame Alcaly of *Tartar* being Impregnated with *Acid Sulphur* from the Grains of *Kermes*, follows the nature thereof, and becomes *Salt of grains of Kermes*; and the ſame *Alcaly* Impregnated with Vinegar, imitates the nature of the Vinegar, and performs that which *Tartar* of Wine doth; like as a Woman, who being Married to a Man, loſes her Father's Name, and takes that of her Husband: For Nature is alike in all things, as *Pythagoras*, and after him, *Hippocrates* have taught. But I have a greater thing in my mind; yet before I come to it, I muſt repeat ſome Experiments out of my *Hippocrates Chymicus*. Diſtil therefore out of a Retort, with an open Fire, Common Salt with four parts of *Bole Armonick*; all of them firſt reduced into a fine Powder (it will ſucceed more happily if they be mixed and blended together, for then they will eaſily fall through the Sieve) poure the Acid Liquor which comes forth, on the Pure Alcaly of *Tartar*, till the *Strepitus* ceaſe, and the Alcaly be Impregnated; Exhale this Mixture in a Glaſs Veſſel, with a gentle heat, or elſe at the Sun, until the Film or Cuticle concrete a-top, and the next morning, when all is cooled, you ſhall have ſplendent grains of Common Salt; So that the ſpirit of Salt in the Alcaly of *Tartar* returns into true *Common Salt*.

Alcaly of Tartar made Salt of *Kermes*.

Alcaly of Tartar made Tartar of Wine.

Alcaly of Tartar made Common Salt.

Alcaly regenerated into Nitre.

As you have done with *Common Salt*, ſo in like manner do with *Nitre*, whoſe ſpirit in the *Alcaly* of *Tartar* becomes true *Nitre*, conceiving Flame, and is a Remedy for the *Quinzey*; ſee *Hippoc. Chym.* Chap. 21. So alſo an *Acid Spirit* is elicited from Allum, with which let the *Alcaly* of *Tartar* be ſo far impregnated, as above-ſaid, till the hiſſing ceaſe; which Liquor in a ſoft Fire is coagulated into Allum; ſo that the Acid Spirit, not only of

Alcaly regenerated into Allume.

all

ly of all Vegetables, but of all middle ſort of Minerals, re-aſumes a body in the Alcaly, and becomes the ſame thing, from whence the Acid Spirit was drawn forth. But the Acid of Sulphur, becomes not Sulphur in the Alcaly, becauſe it hath loſt its terreous pinguouſneſs by the Flame; but it is ſublimated into True Sulphur, with Sand or Flints ground to Powder, for it finds in them That to which it may aſſociate it ſelf and overcome it, as *Hippoc. Chymicus* ſhews, Chap. 21.

Theſe Experiments do evince the Truth of That, which is laid down in the 1. Chapter, *viz.* That the Spirit of the World, or Child of the Sun, is Acid and Pinguous; and that this Pinguouſneſs or Sulphur doth participate of a third, which, as I have ſhewed in the ſaid firſt Chapter, doth inſeparably adhere to Fire and Water; which I will now more clearly demonſtrate in Vitriol, and in the Anatome thereof; wherefore it is vain, ignorant, and againſt all Truth, what they ſcrible, *viz.* that Acids do not prevail over Alcalys, nor draw them hither and thither, as they pleaſe.

Spirit of Vitriol.

To convince ſuch vain Talkers, diſtill the Spirit out of dryed Vitriol, the common way, which is Acid Sulphureous, which you muſt rectify, or diſtill once more, out of a Retort, placed in an empty Cuppel; on which pour on leiſurely, ſo much of the *Alcaly* of *Tartar*, till the hiſſing and ebullition ceaſe, (for if you pour it in haſtily, they will both grow hot, by reaſon of the fiery Nature in both Subjects:) exhale the ſuperfluous, Inſipid, and Aqueous Humour, till you ſee the appearance of a growing Cuticle. (Here you muſt obſerve, that if both the Alcaly and the Acid were not firſt ſufficiently diluted, before their Conjunction, at their very firſt Meeting and Coalition, the White Powder of *Vitriolated Tartar* will fall, and there will be no Chryſtalline Grains produced:) Then remove the Veſſel from the heat, and ſet it in a cold place, and in the morning you ſhall find Shining Grains ariſing and reſembling the form of Vitriol, becauſe the Acid Spirit hath drawn the Alcaly to its own pleaſure (*i. e.*) into the form of Vitriol. This White Vitriol, they call *Vitriolate*

Alcaly regenerated into Vitriol.

trialate Tartar, but I call it *Regenerated Vitriol*, whatsoever the ignorant multitude do murmur to the contrary: for the Acid of Flint in the Alcaly is regenerated into a Pellucid, Frangible, Rocky Substance, which afterwards neither Fire, nor any Acid Liquor can destroy; as I have shewed in its place concerning Flint; and shall shew hereafter, concerning Coral.

The Occult Acid of Oyl, in the Alcaly, is regenerated into Pinguous Salt Sope.

The Acid of Grains of *Kermes* in the same Alcaly, becomes the Son of *Kermes* (*i. e.*) *Salt*.

The Acid of *Common Salt* in the same *Alcaly* becomes a *Salt* of the same Nature.

The *Acid* of *Nitre* in *Alcaly*, becomes True *Nitre*, conceiving Flame, and is a remedy for the Quinzey. The *Acid* of *Allum* in *Alcaly*, becomes True *Allum*; The *Acid* of *Wine* in *Alcaly* becomes *Tartar*, and all the other *Acids*, are regenerated in *Alcaly* their Mother: Why should not then the *Acid* of *Vitriol*, regenerated in *Alcaly*, be called *regenerated Vitriol*? Is it because it is not blackned with Gauls, as *Vitriol* of Iron is; or because it cannot be distilled as Common *Vitriol* may, as some foolishly give forth; but why will you fantastically put a force upon *Nature* from those Accidents which are not common to all Vitriol? Surely that Wise *Mistriss* doth little esteem not only the contumelies of venemous Tongues, but she doth as much undervalue the old doting Fables of Wordy Doctors, who refuse to learn. Attend therefore diligently, that you may be informed, That, as I have shewed a little before of *Acids*; They bring *Alcalyes* to their will, so it must needs happen here: For when Natural Acid hath by chance corroded immature Iron, then they are both coagulated into Vitriol of Iron; which being mingled with Juice of Galls, yields a black colour, by reason of the Iron, and not by reason of the Acid. And when the same Natural Acid hath by chance corroded immature Copper, then they are both coagualted into Vitriol of Copper; which, though mixed with Juice of Galls, grows not black; yet it is, and is also called both by the Skilful

Measuring the Wisdom of Nature by their own folly.

ful and Unskilful, *Vitriol*. That Natural Acid drawn forth by Distillation, when it hath corroded Iron, is coagulated again into Vitriol of Iron, of a green colour.

The same Acid when it hath corroded Copper, they are both coagulated into Vitriol of an *Azure colour. * Cœleſtini.

So the same Acid, when it hath corroded Alcaly of Tartar, they are both coagulated into Vitriol of a White colour, which is nothing else but *regenerated Vitriol*, as my *Hippocrates* shews Chap. 17. Which Book I would wish you to read over before you rail against the Works of Nature.

But why *your Common Vitriolate Tartar* cannot be distilled, I will now clearly demonstrate; That Natural Acidity, which hath corroded Iron, being Healthful, Grateful, and Precious, is sought after by *many*, but found by *few*; I say, This is attempted to be extracted out of the corroded and immature Metal, by Art, and the help of Fire in Distillation; but *seeing it cannot never be alone* (as *Hip. de Diæt.* hath taught) it easily carries off with it its like (*i. e.*) the Immature and Volatile Metalline *Sulphur*, because the wind carries both in its womb, and it becomes Common Spirit of Vitriol, Austere and Corrosive, by reason of the inseparable immature Metalline *Sulphur* mixed with it. Why Vitriolate *Tartar*, made the Common way, is not Distillable?

This Common and sourish Liquor of Vitriol, however rectified, yet contains in it the Sulphureous Liquamen of the Metal, upon this ground that it can *never be alone*, as in the progress will clearly appear. If this Spirit, or Liquor, be poured on Alcaly of Tartar, until the noise cease, The Alcaly is impregnated, but not with a Natural, but a Metalline Acid, the Austerity of the immature Metalline Sulphur, having the dominion; and so a *Son* is begotten, which must needs resemble the properties of his *Father* (*i. e.*) be fixed and constant in the Fire. Lo, here your *Doctorships* may see the reason why your Vitriolate *Tartar* cannot be Distilled? For in that instant of Coition, when the more powerful is embraced by the *Alcaly*, The third, because it is weak, is strangled and slain; as will appear by little and little to the *Reader*. This is That, which the barren *approvers*, with those which went before them, were hitherto ignorant of.

Alcaly made Regenerated Vitriol.

I do call (together with the company of Ancient Philosophers) This Son of Metalline Sulphur, *Regenerated Vitriol*, because it hath laid down its Iron, or Earthly Body, and shines again, re-produced in a brighter form.

Wherefore the soul of the imperfect Metal, hid in the sowre Acid Spirit, forms to it self a Fixed Body in the *Alcaly of Tartar*; Whence it clearly appears, That the Spirit is the *Vehicle* of the Soul, and the *Vinculum*, binding Soul and Body together; which in the subsequent Discourse will more evidently appear to the Studious Lovers of the Truth.

Spirit of Vitriol two-fold.

Let us now hear *Basilius Valentinus*, speaking of this Two-fold-Spirit of *Vitriol* (not to mention mine own Experience) in His Book called, *Repetitio Lapidis Magni*, in these words, *And that you may understand Vitriol*, says he, *you must know that it hath two Spirits, a White and a Red; the White is white Sulphur, the Red is red Sulphur; He that hath Ears to hear, let him hear; And let him diligently mark and forget it not, for it is a difficult saying, and every word is of great weight; the White Spirit of Vitriol is Acid, amiable, very grateful to the Stomach, like Nectar to the Bowels, and profitable for Universal Concoction; but the Red is much more Acid, and more weighty than the White, and therefore requires a longer time to be extracted by Distillation.* Hitherto *Basilius*. He that desires more, let him consult the cited place, the words are of great weight, and for good reason cited and transcribed here.

If therefore the composition of *Vitriol* be of the Natural Acid, amiable, and of a sweet smell, like Nectar to the Inwards; in which no sensible *biting* is perceived by the Tongue, but a spiritual and grateful Acidity (Let *Basilius*, Acid Waters, and Experience, be all witnesses) and of Immature Sulphureous Metal, which Two cannot possibly be severed by Distillation; for the Natural Acidity, which is highly Volatile, ascends not without its Companion, the Acid Sulphur of the immature Metal, because it cannot *be alone*, as I have shewn out of *Hippocrates*, and have also learned by experience; it remains therefore that it must be catch'd by crafty hands, and that in a fit time too, when it is asleep.

There

There are many private ways, which the Studiers of Natures Secrets may take to procure this grateful and much ſought for *Acid*, which though many, yet all conduce to one end, as *Geber* rightly obſerves; yet This way is not to be deſpiſed, though the ignorant do contumeliouſly charge it to procure vomiting, and raiſe many other Symptoms. Ah unhappy Patients! what Miniſters of Nature have you got? I ſpeak not to deaf ones, as being uncapable, but to you who love the Truth, I devote and offer this my work.

Diſſolve then *Vitriol of Iron* (I ſay of Iron, which hath no ſmell of Copper; if This cannot be had, prepare That as Nature her ſelf ſhews the way, *Hippoc. Chymic.* Chap. 28. For That which is Artificial, of the Diſtilled Acid of Vitriol and Iron, will not ſerve here; ſee *Hippoc. Chymic.* Chap. 17.) The *Roman* is the beſt; Inſtill into this clear Solution, the pureſt *Alcaly of Tartar*, which preſently attracts and conſumes the Natural Acid; The Acid and Alcaly do not wax hot in this Conjunction, as before in the Common Preparation of *Vitriolate Tartar*; becauſe the Fire, or the Sulphur of the Immature Metal covets the Fire, and for the greateſt part is ſeparated from the Natural Spirit, as by degrees I ſhall Mechanically demonſtrate *ad oculum*. If this Compoſition ſeem to thee too thick, ſo that the Immature Metal cannot fall down, dilute it with Water, and it will the ſooner fall. Let it not be tedious to thee, to find the Moment of Saturation, which after the firſt Filtration will eaſily follow; or if the Alcaly do overcome the Acid, it produces no other inconvenience, then the loſs of time in digeſtion, That the Immature Metal may ſubſide (ſee *Hippoc. Chymicus* Chap. 10.) Exhale leaſurely, unto the Cuticle, the clear Liquor placed in a Bath of Dew in a Glaſs Veſſel (being acuminated under or in the bottom, to the end, that if there be any of the Immature Metal, it may be ſeparated in the heat at the bottom) and when 'tis cold, you ſhall find *Splendent Chryſtals*, which do neither heat nor turn the ſtomach, as *Common Vitriolate Tartar* doth; for they have not the Sowre and Corroſive Sulphureous Liquamen

Tartar Vitriolate of great Vertue.

men of the Immature Metal, and therefore are much to be prized in Phyſick. Lo here the Rudiments out of the Hippocratical and Pythagorical School, which are enough for the Ingenious; neither is it lawful to diſcover All plainly; Theſe and many other Things are to be reſerved for *Our followers*: Concerning the Vertues of this *Vitriolate Tartar*, ſee *Crollius*, and you will act ſecurely: I ſay no more, for it ſhews it ſelf to be a moſt powerful *Hercules*.

'Tis true indeed, That one Ounce of this *Vitriolate Tartar*, requires at the beginning about three Ounces of Alcaly, becauſe firſt it mortifies the Immature Sulphur of the Metal, and afterwards draws forth the Natural Acid. An Example of which Operation I have given Chap. 3. concerning the *Lixivium* of Sope-boilers, *viz.* where Vegetable Alcaly doth firſt mortifie the Acid of the Calcined Flint, which is unfit for the Lye, and doth concrete it into a rocky ſubſtance, *for contraries are Coagulated by contraries*; and afterward the ſame Vegetable Alcaly doth elicite and draw forth from the Calcined Flint a moſt powerful Alcaly, *becauſe like is diſſolved, drawn, and joyned to its like*; The ſame Action is alſo performed in this our *regenenerated Vitriol* (or *Vitriolate Tartar*, call it as you pleaſe) yet with this difference, That the *Alcaly of Tartar* is turned with the Immature Metal into its *Coagulum*; and afterwards it abſorbs the Natural Acid; which difference is to be obſerved, becauſe it is uſeful. See alſo *Hippoc. Chymicus* Chap. 3. and 4. where the Example of Sope is not without Cauſe propounded, nor is it to be thought uſeleſs, as heedleſs people think. This *our Vitriolate Tartar* is not *conſtant* in the Fire, but for the half *Volatile*, according to the property of the *Father* which begat it, whereas on the contrary the *Common Tartar* remains conſtant in the Fire, by reaſon of the Metalline Sulphur, which the Alcaly had imbibed, and therefore it is not Volatile or Diſtillable, becauſe it hath not got the Metalline Soul, which perſeveres in Fire, as I have above likewiſe ſhewed.

Contraries coagulated by Contraries.

Artificial Vitriol of *Mars* and *Venus*.

If therefore Spirit of *Common Vitriol* be informed with the *Soul* of Copper or Iron, 'tis no wonder if being poured

poured on these Two perfect Metals, it dissolves Them, and with Them, make a counterfeit shew of *Vitriol*; for, like is easily joyned to like, fire to fire, water to water Spirit of Vitriol, being distilled, delights in Sulphur; and in its like in *Mars* and *Venus*, it is pleas'd with it, it pierceth into their Bowels, it dissolveth both Metals. and again assumes a body, and with Them, resembles *Natural Vitriol*. But having no Dominion over Them, it cannot perfect the said Metals, because it hath no more than is sufficient for its own sustentation; for if you again separate the Acid from the said Metals, by Distillation, the same Spirit of Vitriol will return as you poured it on, neither perfecter nor better, and the remaining *Caput Mortuum* is melted into the same Copper, that it was, before it was dissolved, or into *Crocus Martis*, if it had dissolved the Iron without any alteration; neither doth it come forth better, or worse then other *Crocus's*, however prepared, as I have shewed, and shall further shew; for *Nature is the same in every thing*, as both *Pythagoras* and *Hippocrates* have taught.

If therefore Spirit of Vitriol make an impression on Copper, by means of Sulphur (as I have shewed) and yet can take away nothing of the Vertue of the Copper, either by Maceration, or Solution, Coagulation and Distillation; much less can other Acids, of what kind soever? It is both admirable and pleasant throughly to search into this Matter, for it is of great concernment, as to the Common-wealth of Medicine, so also to all *Virtuosi*, and to the Numerous, the Famous, and in our times, the Flourishing Company of *Apothecaries*. Make therefore *Ærugo*, or *Verdigrease*, of thin Plates of Copper with Recent Grapes, thin Webs of Linnen or Silk being interposed, adding thereto whatsoever pleases you, in the rude way of operation, *Vinegar*, *Urine*, (of Women doubtless, otherwise it would not bear the Name of *Venus*,) *Allum*, and *Nitre*. The *Deans* of the *Austrian* and *Norimberg* Colledge, with the other *Approvers*, do affirm, That this miscellany doth not, in time wax sowr, yea that the Acid vapour of the ingredients cannot pass through the thin web to the body of the

Ærugo made of Plates of Copper and Grapes.

the Copper to corrode it, but if this can ſavour (I will not ſay of Truth) but of Probability, let the Skilful judge: How *Ærugo* is made, *Dioſcorides* Teaches rightly, and without fraud, Five Maſterleſs Theeves and Robbers, fighting under the groſs Banner of Ignorance, do aſſault a frail Female, (let modeſt youth take notice, that this chaſte baſhful Female is clad with a thin Vail, that ſhe may not appear naked in the ſight of Five ſuch Souldiers) who for a long time makes a ſtout reſiſtance; but ſeeing *Hercules* himſelf cannot long withſtand *Two*, ſhe at laſt is made a prey, and with one of the Robbers (*i. e.*) *Vinegar*, as I ſhall ſhew, ſhe is turned into *biting Ærugo*, imitating the nature of the Acid. This Matter is called by our Anceſtors *Green Ærugo*, but it hath not been called by the Name of *Vitriol*, becauſe it hath not the properties of *Vitriol*; and therefore they called it *Ærugo*, to intimate that the *Five Robbers* altogether had not the force or power to extract the leaſt Vertue from the Copper, or of altering it in the leaſt point, but only of corroding its Corporeity; for they have no dominion over It, neither do they return the richer from It: And though there be many that do boaſt of ſuch a thing, yet their boaſting is vain; for it is eſtabliſhed by the Decree of the great Creator, that the *more noble* ſhould not degenerate into the *leſs noble*, or the *better*, into the *worſe*, and ſo paſs into the ſervile form of a *ſlave*.

Copper is not deſtroyed by Acid Liquors or Vapors.

Wherefore *Copper* (or if you will, *Venus*) is now turned into *Verdigreaſe* biting and rough, and is diſſolved in Diſtilled Vinegar (out of which it was made) and again is Congealed into *Verdigreeſe*, the Fæces being rejected, *&c.* This purged *Ærugo* or *eroded* Braſs, is diſtilled with an open Fire out of a plated Retort, and afterwards is rectified out of Sand. Lo here, Thou Myſtes of Nature, This is that *Spirit of Venus, and a ſecret menſtruum, as Alcaheſt* (ſee *Hippoc. Chymic.* Chap. 29.) which the Deans and Doctors of the *Auſtrian* and *Norinberg* Phyſick, with their Fellows, do adore for *the Son of Venus*, of whom *Epictetus* ſayes well, *Many are word-wiſe, not deed-wiſe.* The procacity and filthy licentiouſneſs

Spirit of *Venus* made.

tiousness that *Venus* is accused of by the many, but vain clamours of false witnesses, *viz.* that It admits of Five Lovers in one Act, hath drawn Philosophers not only to the admiration, but even to the unbelief thereof; unless they had also known, That in the Court of Accusation, a multitude of Witnesses is many times loathsome, and suspected by the Judges; especially since they are not ignorant, that in Nature *Love* is so far from admiting Five, that it endures not a Third; whence it is, That they rather give sentence aginst the Accusers, and say, That as *Venus* upon Examination, notwithstanding the false Imputations of her Accusers, is found *chaste* and *constant* to one Male; so it may likewise happen, that any man may grow Famous from such Accusations, as many have done, who were otherwise unknown. 'Tis known to be True, That indeed *Venus* is Lascivious, and that she admits every Male, (that is all, Acids as well Occult as Manifest, as Vinegar, Oyl, Suet, Sugar, Honey, *&c.* I say, they all wax green with Copper) without any difference into her Imbraces; so that all Males are hot in Love (*i. e.*) wax green) with Her. But (witness Alcaly, the Mother of Natural Things) *She* is never ravished with the delight of any of them, to a *deliquium*, but only with her own Brother. But that this discourse may appear more clear, we will fetch the Doctrine of it a little higher, *viz.* That the Acid of every Vegetable, drawn forth either by Fermentation or Distillation, or Expression, whether it be Occult or Manifest, if it be poured on the *Alcaly of Tartar*, doth inform the same Alcaly, with the *Soul* of That, from whence it was taken; and it is made a Salt of the same Acid Nature, as I have shewed in the beginning of this Chapter, by the Graines of *Kermes* (in which the Deans with their Fellows deny, that there is any Acid (*i. e.*) any Seminal Vertue) and by Meal (out of which They boast they can distill *Acid Spirit* of *Sal Armoniack*: see also *Hippoc. Chymic.* Chap 2. and the end of Chap. 17.

Copper grows green from all Acids.

So also Vinegar of Wine, distilled and cast upon Alcaly of Tartar, to satiety, is Coagulated into Tartar, and that of the same Nature with the Wine from whence the

Artificial Tartar.

the Vinegar was taken. This Tartar, if it be diſtilled out of a Retort, with Fire of Sand, or an open Fire, there comes forth a fat Oyl and bitteriſh Liquor; as in the Diſtillation of *Common Tartar*.

Artificial Salt.

I have alſo ſhewed the ſame thing, in the beginning of this Chapter, concerning Nitre, concerning Salt, concerning Allum, and alſo concerning Vitriol; for all Acid Liquor joyned with Alcaly, doth impregnate it with the *Soul* of that Body from which it was reduced, and forms a Body to it ſelf *ad Lubitum (i.e.)* like its own proper Nature.

Spirit of *Venus* reduced to an *Examen*.

Let us ſee now, for a Tryal of the Verity and Glory of *Noble Phyſick* whether That Vinegar Diſtilled from Verdigreaſe (which they do ſo ſolicitouſly endeavour to keep from the Examen of Learned Men) be the *Legitimate* Son of *Venus*, or no?

I have ſhewed, That *Acid* is the one only Spirit of the World, and the Child of the Sun, which is not found *naked* upon the earth, but refuſing to be *alone*, It aſſumes Matter, wherewith it dwells, encreaſeth, regerminates, and is multiplied, ſometimes as the Artificer pleaſes, for his proper ends. This when it falls on the ſeed of Copper (that I may ſo ſpeak) it cloaths it ſelf with the Nature of Copper in a long and laborious work; Therefore it is not ſeparable from Copper it ſelf, unleſs by the total deſtruction of the Copper, as the example of *Salt of Tartar* in my *Hippoc. Chymic.* Chap 10. doth ſhew; for carrying in it, the leaſt Odor of a Metalline Nature, it cannot *deſcend* to the Nature of Vegetables, And the ſame Spirit falling upon the Seed of a Vine, Clothes it ſelf there with the indoles of the Vine, and in like manner cannot *aſcend* to the Nature of Minerals; as I have demonſtrated out of *Lully*, and by Experience: yea it is not ſeparated from the Diſpoſition or Indoles of the Vine, unleſs, being diſſolved or looſned from its Body by Nature and Art, it return to the Element of Air, whence it came, as *Hippoc. Chymic.* in the fore-cited 10. and 18. Chapters ſhews. The ſame is alſo to be underſtood of Salt, of Vitriol, of Nitre, and of all the Things in the World; for this cauſe, becauſe Art cannot create Seeds;

He

he that boasts he can do it, *Cosmopolita* proves him to be a *Deceiver*; so that every Spirit, either Occultly or Manifestly Acid, hath but one only *Soul* within it, with which, it being inseparably joyned, doth constitute the Form of That Body, in which it determines to dwell; from which, when it is extracted, and again instilled upon a new Alcaly; and is absorbed by it, it takes upon it the like Body, wherewith it was cloathed before, or from whence it was first extracted, but that Body somewhat clearer; an Infallible Argument, That a Spirit either Occultly or Manifestly Acid, is the Vehicle of the Soul, and the Bond uniting Soul and Body together: And unless the Spirit of all Things in the Universe were Acid, it could not invisibly carry in its Belly or Womb the *Anima* or *Soul* of the Body; as *Hermes* and Experience Teach.

Let us now return to the *Child new born*, which the Sworn Servant of *Venus* have lately begun to nominate and to commend for the *Son* or *Spirit of Venus*, peremptorily also affirming, That, *This hath drawn mighty Vertues, from his Mother or Copper*; but they consider not, that the Vertues of Things, as also the force of Purgatives, do consist in their *Soul*; which I have shewed in the first Chapter, to be a *Child of the Sun*, and to be inseparably joyned to the Spirit of that Thing, both which do constitute that Eximious Vertue, which is in Copper: which Spirit ought again to manifest it self in Alcaly, if it did flow in an Acid form. as I have experimentally shewed to the Eye, concerning other Spirits, and concerning Alcaly of Tartar. Let us now proceed to Experience, and to make Trial of this Acid, and Rectifyed Spirit of *Venus*, saturated to Sufficiency, with Alcaly of Tartar, as I have formerly taught concerning Salt, Vinegar, and Distilled Nitre; (*i. e.*) *Thus*, Pour so much of This Spirit on the Alcaly of Tartar, till the hissing cease (near upon equal parts) suffer the abounding, or exceeding Flegme to exhale, or if you will, distill it carefully to Siccity (distill that Flegm from an high Glass in *Balneo*, and there will come forth *Aqua Ardens*, see *Hippoc. Chymic.* Chap. 18.)

The Vertue of Purgatives whence?

Spirit of *Venus* in Alcaly made Tartar.

and you ſhall find *regenerated Tartar* of the ſame Nature, Condition and Property, that That was, which was above generated from Vinegar of Wine, for it is the very ſame; for if it hid any thing of the Nitre, the Allum, or the Copper hid in it, as they ignorantly give forth, they would all be manifeſted in the Alcaly of Tartar; as I have Mechanically ſhewed above. But it muſt needs be, that This Spirit can have no other Inſtruments but diſtilled Vinegar, ſince it can only make a Body of Tartar for it ſelf: Whence this Spirit hath been preſently known by Philoſophers, not for the Immortal Son of *Venus*, or as *Alcaheſt*, but for the True Genuine Brother of *Vinegar of Wine*; and that not Spurious neither, as my Revilers and Reproachers have publiſhed to the World, but the Legitimate Son of the Vine, which hereafter will count it an impious thing to be reviled by unskilful Maſters; Therefore in this regeneration, He was willing again to diſcover himſelf to the Curious, and to the Lovers of Truth, for the *True and Natural Brother* of Vinegar of Wine (*i. e.*) for Diſtilled Vinegar. Now that nothing may be wanting to this Enquiry, but all doubt taken away, *viz.* that This Spirit, which they dream to be the *Child of Venus*, hath acquired no Conſtancy, no Immortality, or excellent Vertues from the Copper, nor that it is, as *Alcaheſt*, as the Deans with their Fellows do cant, you may learn by this Experiment. Take this *regenerated Tartar* (to wit, from the Imaginary Spirit of *Venus*, and the Alcaly of Tartar) diſtill it out of a Retort, as you did before, and there will extil an Oyl of a loathſome ſmell, together with a bitteriſh Water; as I have ſhewed a little before from *regenerated Tartar*, out of ſimply Diſtilled Vinegar: Out of what hath been ſpoken, it appears, that whatſoever is diſtilled from the Alcaly of Tartar, which is impregnated with Diſtilled Vinegar (*i. e.*) the *bitteriſh Water*, *Aqua Ardens*, and the Oyl, *taking Flame*, the ſame thing is diſtilled from Alcaly of Tartar, impregnated with fained Spirit of *Venus*, to wit, *bitteriſh Water*, *Aqua Ardens*, and Oyl-*taking Flame*: and ſo, That *Spirit of Venus*, ſince it hath all the Properties and Operations of *Vinegar*, is nothing

Spirit of *Venus* which is as *Alcaheſt*, is known to be Vinegar.

Spirit of *Venus* is Diſtilled Vinegar.

nothing elſe, nor never will be, than *diſtilled Vinegar*, Witneſs *Ariſtotle* and Experience. But leaving this puny, vain, and futile Society, to pleaſe themſelves in their fooliſh Detrectings, I convert my Speech to you, O ye famous Lights of the World, That you may judge of the Truth herein, not that I would trouble you, to vindicate it from the fained and raſh Contumelies of ſuch clamorous Reproachers, ſince it appears out of *Pliny*, That when Frogs croak more than ordinary, it is a ſign of a Tempeſt enſuing: ſuppoſing then, but not granting, that one drop of Acid contains only the 8200 part of the Eximious Vertue of Copper, I ſay, this ſo ſmall part, ought yet under the heat of Fermentation, to extend it ſelf, and to regenerate, if not in Vegetable Alcaly, yet at leaſt in Metalline, as the order of Fermentation elſewhere ſhews; ſo that it would turn, though not much, yet a ſmall quantity of the Metalline Alcaly, into Copper, no otherwiſe, then the Vertue of Acid Vegetables, and the mid-ſort of Minerals doth tranſmute Alcaly of Tartar into a Salt of its own proper Nature, as I have before ſaid and proved; but as the *Antecedent* and their Premiſes are falſe and ſavour of groſs ignorance, ſo is the *Conſequence*. Again, ſuppoſing, but not granting, That Vinegar did carry off with it, ſuch eximious Vertues from Copper (as they unlearnedly and without truth affirm) yet I could never find, either amongſt Philoſophers or Phyſicians, that It was aſſumed within the Body, but whatſoever was got from the Copper was always uſed outwardly for Chirurgical Operations. And although mighty Vertues might be drawn forth and diſtilled out of Copper by Vinegar, which I have ſhewed to be impoſſible, why is not the ſame Eximious Vertue drawn forth, with leſs labour, out of immature Copper, ſince it is eaſier to go one Mile, than two? Why ſhould my *regenerated Vitriol*; prepared from Crude Vitriol of *Mars*, procure monſtrous Vomits and Suffocations, if you draw forth ſuch Eximious Vertues from mature Copper by Vinegar; to which you ſubjoyn theſe lofty, but moſt falſe words, *This moſt praiſe-worthy Spirit, is not only of great uſe in Phyſick, ſeeing it highly Cures and Relieves*

This fained, yet praiſed, Spirit of *Venus*, is but a counter eit *Panacea* and *Alcaheſt*.

lieves the Epilepsy, Appolexy, Hysterical and Hypochondriacal Distempers; but is as the Liquor Alcahest, and not as other Acid Spirits, which by Solution do suffer and are destroyed, and so turned into another ens: See *Hippoc. Chymic.* Chap. 29.

Now let the Reader, who loves the Truth, judge, whether any thing could have been devised more sottish, than to affirm That the *regenerated Vitriol* of Philosophers educed from an Immature Mine of Iron, is pernicious and deadly, when we see, that every year some Myriads of Men do drink, even in great quantity, Acid Waters, saturated with Immature Iron and Natural Spirit, and that with great benefit and advantage; and also That the great Imaginary Vertue, extracted with Vinegar out of Mature Copper (if there were any such) is a *Panacea*. I may very aptly apply hither, That of *Plautus*, nothing can be more foolishly, sottishly, or falsly spoken.

It remaines that we bring That most praised *Spirit of Venus*, which they say is as *Alcahest*, by dissolving some Body unto an *Examen*.

Alcahest what? (*a*) Pharm. 14 (*b*) Imag. Ferm. *S.* 8. (*c.*) Verb. explic. (*d.*) *Arcana Paracels.* (*e.*) *Potest. Medic. S.* 4. 3. (*f.*) *Arboravita in fine.*

Now *Alcahest* is described by *Helmont to be an Eximious Liquor*, (*a*) *to be got by the Art or Labour of* Sophia (*b*) *which doth not only resolve every visible Body into its first Matter*, (*c.*) *but is moreover Immortal and Incorruptable* (*d.*) *it putrifies Nature, and takes away all Diseases* (*e.*) *but it is not given to putative and empty Doctors, but to well Lined and rich Understandings* (*f.*) So *Helmont*: Now let the equal Reader Judge, whether this *praised Vinegar* of these Prateing and Wordy Doctors, which is Distilled from *Copper* be alike in Vertue to *Alcahest?* Truly, if this their fooliſh Assertion were profoundly examined, and laid before the Eyes of the Readers, it would move Nauseousness and Indignation; and therefore I shall discover their Vanity by Experience alone.

Spirit of *Venus* dissolves Coral.

Dissolve then at least one Drachm of Red Powdered Corral, in *This* Vinegar, which they proclaim to be the *praised Spirit of Venus*; dry the Solution in a Bath: In like manner dissolve another Drachm of pounded Corals

Corals, in Vinegar ſimply Diſtilled, which likewiſe Exſiccate in *Balneo*: Diligently gather up thoſe Powders, and weigh them ſeverally in a Ballance, and you ſhall find the diſſolved and dryed Corals to be increaſed half a Drachm, as well by the *Spirit of Venus* (which They count as *Alcaheſt*) as by the *Vinegar Vulgarly Diſtilled*: So that the Corals have imbibed as much Acid Salt from the counterfeit *Spirit of Venus*, as from the Diſtilled Vinegar. Whence it again appears, That This ſhews it ſelf to be *Vinegar*; becauſe it is ſo indeed, and not the Liquor *Alcaheſt*; as the *lofty Doctors* would impoſe upon rude and ignorant people.

Vinegar diſſolves Coral.

Spirit of *Venus* is Vinegar, not Alcaheſt.

Again, They urge, That this praiſed Spirit of *Venus*, doth diſſolve Pearls without bubbles, and leaves the *cortices* untouched. Truly this may ſeem a wonder to Men altogether unskilful in the Art of *Phyſick*, and who never learned the Rudiments thereof; but methinks it ſhould ſeem a trivial and ſleight thing to the *Deans*, and the reſt of the *Approvers*. For what ordinary, or mean Phyſician can be ignorant, that *Vinegar* ſimply Diſtilled, doth perform the ſame thing (though in a longer tract of time) if you caſt whole Pearls into It; and therefore *your ſpirit of Venus which you account as Alcaheſt*, will not ceaſe to be *diſtilled Vinegar*.

Spirit of *Venus* is diſtilled Vinegar.

But why the skins, or pellicles of Pearls are not diſſolved by *either* of the *Vinegars*, the reaſon is, Their fatneſs and unitive glew, the ſeat of the Child of the Sun, which is proper and familiar to all Cruſtaceous Creatures, to Fiſhes, and the Membranes of Animals; The counterfeit *Son of Venus*, however extolled by *vain Approvers*, doth never touch this Glew in ſtones of Crabbs, Pearls, *&c.* it hath no acceſs to them, it is Leprous in compariſon of them, and therefore is not admitted to the Princely-Seat unknown to Ideots.

But why *Vinegar* doth corrode the Medulla of Pearls, of the afore-ſaid ſtones and Corals, *&c.* The cauſe is, That Nature hath put leaſt part of Acid into moſt things (as I have ſhewed in the ſecond Chapter) which leaſt part, unleſs it be multiplied by Art or Nature, is eaſily ſuppreſſed by the more powerful; I will give an Example in the

the afore-ſaid diſſolved and dried Corals, in which there is the leaſt portion of Natural Acid, which being oppreſſed by the counterfeit *Spirit of Venus* is made ſubject to *It*; hence they are encreaſed in weight.

Again, diſſolve theſe dried Corals in ſome water, either Diſtilled, or common clear water; let the Solution reſt, that the Turbid may ſubſide (which they improperly call *Faces*) which nevertheleſs you muſt ſeparate, and drop into the clear Solution a little of the ſpirit of *Vitriol* of *Sulphur*, which overcoming the counterfeit *Spirit of Venus*, not by its Acidity, but the Nobleneſs of its Soul, caſt out the *Vinegar* (which they call *Spirit of Venus*) from its ſeat and place, and doth aſſume the poſſeſſion of the Region of the Spirit of *Vitriol*, and with the Corals repreſents the form of curdled Milk; but the *Counterfeit Spirit of Venus* being now expelled by the more Noble, is diluted and ſticks to the ſupernatant water, and is mingled with it.

Waſh both theſe Coagulums as much as you may, and dry them ſeverally in brown Paper, and you ſhall have *Magiſtery of Corals*, equal in weight, as well from the counterfeit Spirit of *Venus*, as from the *Vinegar* ſimply diſtilled, becauſe it is the ſame.

Spirit of *Venus* is diſtilled Vinegar.

But take that water ſo waſhed from the Corals, in which, as I have ſaid, the counterfeit Spirit of *Venus*, or ſome ſimple diſtilled Vinegar was diluted (if you have otherwiſe warily poured on the *Spirit of Vitriol*, for if you have careleſly, and without judgment powred on more than the Coral will imbibe, it will not ſwim atop; but I ſuppoſe the affuſion was skilfully made) and inſtill into it Alcaly of Tartar, till the Motion of Ebullition ceaſe; exhale the abounding Water in a Glaſs Veſſel placed in Sand, and you ſhall find *regenerated Tartar*, as I have ſhewed above, from the Counterfeit Spirit of *Venus*, or Vinegar, ſimply diſtilled, imbibed in Alcaly of Tartar, for it is the *ſame*, by this infallible Argument, That in the Corals diſſolved and dryed in a Bath, there remained only half a Drachm of Acid Salt from the *feigned Spirit of* Venus. That Acid Salt being ſeparated from the Corals by Spirit of Vitriol, cannot be alone;

where-

wherefore it guards it self again in Elementary Water, as in his Mothers lap, and diffuſes it ſelf in her; and becomes again *Counterfeit Spirit of Venus*. And unleſs Elementary water did contain Occult Alcaly in its belly, Acid Salt could not inhabit in it; becauſe that *alone it is not ſufficient for it ſelf*: as *Hippocrates* hath taught us, *De Dietâ*. Simple diſtilled *Vinegar* performes alſo the ſame thing; ſo that it now appears, even to the moſt unskilful in Phyſick, that this moſt celebrated *Spirit of Venus*, here and every where, is *nothing* elſe, and ſavours of *nothing* elſe, but *Diſtilled Vinegar*, whatſoever Bugbears its Adorers would fright us with. And although *Crollius*, *Beguinus*, and other Writers of the Elements of *Chymiſtry*, in expreſs words do call it, *Solvent Vinegar*, from whom the proceſs of this *Vinegar* is ſtoln word for word, as my *Hippoc. Chym.* ſhews Chap. 29. Yet This poyſon of Ignorance hath infected, not only *Auſtria*, but almoſt all upper *Germany*; witneſs theſe unskilful Approvers and their fooliſh *Partizans with their Rythmes*. It would be no wonder, if, as the *Romans* of old, ſo Magiſtrates now, would eject out of their Cities and Common-wealths, ſuch Harlotry Collegiates, and ſuch a Neſt of Bablers, who do ſcrible of things unknown, even to themſelves, to their Neighbours hurt. *Low Germany* is yet free from this Contagion, ſo is *Italy* and *France*, and for the future, I hope by this Antidote they will be preſerved.

Vinegar from *Ærugo*, why more Acid than Simple?

Now, Why *Vinegar* diſtilled from *Verdigreaſe*, in a ſmall quantity, doth more powerfully diſſolve Corals, than That which is diſtilled the vulgar way? I have ſhewed the reaſon before, *viz.* that it happens, becauſe *Vinegar* diſtilled the common way, is as yet diluted with much Water; but the Elementary Water is evaporated from That, which is diſtilled from *Ærugo*, by gradual Exhalation, no otherwiſe than in the diſtillation of Green and Humid *Vitriol*, for then the Acid Salt being long in the Liquor, would be very weak; but when the *humid* (which they call *Phlegm*) hath by degrees exhaled and evaporated before diſtillation, the Acid Salt muſt needs be more powerful and ſtrong in a leſſer quantity of water; for Light by how much more contracted, by ſo much the more

more efficacious. This diſtilled Spirit of *Vitriol*, if it again corrode any thing, either Iron, or Copper, and be coagulated with it, and again be re-diſtilled from it, the Liquor indeed returns Acid of the ſame nature, but much more ſubtle, becauſe that in all Coagulation, every Salt or Saline Spirit loſes of its *Radical Humid* (what that is, I ſhall ſhew anon) when of neceſſity it muſt lay down its *Earth* (the Vulgar call it its *Fax*) and ſo the *Lumen* muſt be more contracted. But from the repeated Coagulation and Diſtillation, It returns more watery; and at laſt returns to Elements; as I have Mechanically ſhewed in Alcaly of *Tartar* (for Example) in my *Hippoc. Chymic.* Chap. 10.

After the ſame manner and faſhion, *Counterfeit Spirit of Venus*, by repeated Solution, Coagulation, and Diſtillation, re-paſſes into Elements; for as often as it diſſolves Corals, or any other thing (I began with Corals and will end with Them) and is afterwards Coagulated and Exſiccated with the ſame Corals, ſo often it lays down its *Earth* or *Alcaly*, and as much Earth as it lays down, ſo much Acid Salt the Corals do drink up, becauſe *this cannot be alone*, and the *Vinegar* becomes ſo much the more Aqueous, and by repeated labour, at laſt returns to Element (*i. e.*) into Inſipid Water; but the Earth and Acid Salt gave weight to the Corals, which alſo paſs out of them by repeated Diſtillation, and go to their own Country, after the ſame manner as I have ſhewed concerning Wine in *Hippoc. Chymic.* chap. 18.

Why Vinegar returns Acid from Copper, and not from Alcaly.

Now that *Vinegar* or Spirit of *Vitriol*, poured on Copper, and re-diſtilled, do return Acid; but from the Alcaly of *Tartar*, Inſipid and Aqueous, the reaſon is, becauſe Alcaly being a *Vacuum*, ſaturated it ſelf with Acid Salt which dwelt in the Aqueous Liquor; whence the Acid Salt converts and tranſmutes the Alcaly into its own nature. But Copper is not a *Vacuum*, for the *Acid*, or Form of Copper doth overcome its *Alcaly*, and therefore it doth not abſorb Acid Salts; and though they act, and are buſie about *It*, and do erode its body; yet they can make no impreſſion of any of their Form or Vertues, nor can they deſtroy It, becauſe Copper hath obtained a con-

conſtant Soul from Nature, or to ſpeak in *Plautus*'s Phraſe it hath Acid in its breaſt.

Again, They demand why *Vinegar* is re-diſtilled from Copper, even as it was poured on, but from Lead Inſipid? Although I am almoſt aſhamed to handle This, or the like Childiſh Queſtion, yet being moved with commiſeration towards thoſe unskilful and ſluggiſh Doctors, hoping that this my preſent anſwer may be for their future amendment, I ſhall willingly repeat my former anſwer; I told you that *Copper* hath a prevailing Acid, whence it is that it reſiſts not only *Vinegar*, and the *Counterfeit Spirit of Venus*, but alſo all Acid Minerals; but *Lead* hath obtained but a very little particle of It by Nature, and therefore it imbibes every Acid, in hopes of Perfection (that I may ſo ſpeak) as I have ſhewed in *Alcalyes*. This is the cauſe why *Lead* is ſimilitudinarily called by Philoſophers, *The firſt matter of Metals*, or the *Alcaly* of Metals, in reſpect of other Metals, which are more or leſs richer in Acid. Gold is moſt Acid, and therefore moſt perfect, as I have ſhewed in the 2. Chapter. See how eaſily I have extricated my ſelf out of theſe great Difficulties! Why from *Lead* inſipid?

Some of *Ours* may wonder why I ſpend time in a matter ſo plain, for *Baſilius Valentinus* an Age ago hath taught us how to prepare this *Vinegar* out of *Æruge*, in juventute, and he called it not by the name of *Spirit of Venus*, but *Vinegar* (for he knew well (ſo do not the *Deans* and their Fellows) that it was eſtabliſhed by the decree of the Supream Creator, That the more excellent Nature, ſhould not degenerate into the worſer) which is proved by the remaining *Fax* or *Caput Mortuum* left in the Retort, after the diſtillation of this *Vinegar*, which, with *Borax*, by an eaſie Fuſion returns into *Copper*; an evident Argument That *Copper* loſt none of its Subſtance, or excellent Vertue (as they ſay:) See more in my *Hippocrates Chymicus*, chap. 29. Spirit of *Venus* is *Vinegar*.

For concluſion of this Chapter, I repeat, That whatſoever the World hath, is begot, preſerved, and multiplied by the Acid Spirit, either Occult or Manifeſt, to which it owes its *All*; And That the Soul dwells in the

Acid, and is inſeparably bound to it; and that the Body, or Alcaly, is informed according to the property of the Acid *Spirit*. If therefore Nature be alike in every thing, and Art doth imitate Nature, as *Pythagoras*, *Hippocrates*, and Experience teach, it muſt needs follow, That when the Acid Spirit of *Vinegar*, diſtilled from *Verdigreaſe*, hath corroded Corals, and hath been abſorbed by Them, and coagulated with them, then the Corals will be endued with the properties and conditions of *Vinegar*; not that the innate Acid, or Form of Corals doth periſh, but only is ſuppreſſed by a more powerful Acid, as I have ſhewed before in the *Magiſtery*. If therefore your celebrated Spirit of Venus, *lawfully and duly* (as they ſay) exhibited (though they never yet ſhewed the way) helps *Hippochondriacal*, *Epileptical*, and *Hyſterical Diſtempers*, &c. the Magiſtery of Corals (which with a proud and ſwoln breaſt, they call *Our Soluble Magiſtery*) made with Spirit of *Venus*, muſt needs perform much greater things? if otherwiſe, the Spirit muſt animate the Body, to whom it is joyned; as I have hitherto clearly and experimentally ſhewn, and ſhall hereafter ſhew.

But as *their Spirit of Venus lawfully and duly adminiſtred*, is the beſt to ſeaſon a Vinegar Veſſel, ſo alſo it hath, and will always retain the nature of *Wine-Vinegar*, till it become like *Alcaheſt*.

But our *Maſter Deans*, with the reſt of their Colledg-Company, out of the treaſure of their Liberality, have lately diſcovered to us a great Secret, which had lain hid to this very day; *viz. That their Counterfeit Spirit of Venus helps the Tooth-ach*: neither could we learn it out of *Dioſcorides* his Hiſtory of *Vinegar*, unleſs it had been diſcovered to the World in a Dream, or by hidden Revelation: But as *Vinegar* doth diſſolve Corals, ſo it ſcours off, and takes away the hardned *Mucus* or Filth about the Teeth, that the Gums may be again united to the Teeth; for ſound and ſharp-pointed Gums admit not Pain, but when they are forced to recede by Filth, and the *Teeth* are never ſo little denudated or bared, preſently upon the ſolution of a *continuum*, the Blood ſours, putrefies, and is coagulated there into an hard *Fax* (which

Vinegar cleanſeth.

ſome

ſome, but improperly, call *Tartar*) which *Fax*, when it is abraded or taken off with *Vinegar*, or Spirit of *Salt*, or elſe with an Inſtrument of Iron, preſently the *Teeth* find relief.

And thus you have, O ye ſincere lovers of Truth, the entire Tragedy, the Riſe and Overthrow of this *Celebrated Spirit of Venus*, which, with all its Eximious Vertues, cannot cure the ſlothfulneſs of theſe Approvers and Subſcribers; ſo that it happens to them, as to thoſe mens Children, who hire other mens Farms; for They ſeeing their Fathers (they themſelves being yet but Children) gathering in the fruits, and commanding the labourers, do preſently conclude the *ſoil* is theirs, and ſo are very Jocund: but when they grow up, and underſtand that there was nothing *Theirs*, but the labour of Tilling the Ground, then their Mirth is turned into Sorrow. Even ſuch are theſe men, and as we read in *Sendivogius*, whatſoever the *Alchymiſt* would have out of Sulphur, it ended in a ſnuff, the ſame happens to theſe *Deans* with the other Approvers; Whatſoever *Eximious Vertues they would have from Copper*, 'tis ſtill naught but *Vinegar*.

CHAP. VII.

That no Matter can be ſo deſtroyed, but It will remain under ſome Form or other.

I Shewed in the fore-going Chapter, that Acids do draw Alcalyes to their own properties, and that Both are changed into Salts. But thoſe which are not fully Alcalyes, when a noble Acid *ſupervenes* upon them, their internal Acid is indeed abated, but not ſo waſted or deſtroyed, that any other new thing can be *Regenerated* out of it.

I will now proceed to prove by the following Argument, and that Mechanically, That all Alcalyes do, after a ſort, retain of the Form, with which the *Mixta* were ſaturated, before they were reduced by Fire, into Al-

caly; of which see *Hippoc. Chymic.* Dissolve half an ounce of *Sublimate Mercury*, in fifty ounces of *Common Water*, distilled, or at least a drachm of *Sublimate* in twelve ounces of *Water*. Into a part of this clear *Solution*, instill by drops, but with a quick infusion, fixed Alcaly of *Tartar* in the form of Liquor, or (as they call it) Oyl of *Tartar per deliquium*; which in a moment separates and absorbs the Acidity, for the greatest part, from the *Mercury*, and the *Mercury* falls into the bottom of the Vessel, in the form of Powder obscurely Red. This Operation is called by *Apothecaries*, and their Operators, and by all Lovers of Physick, *Precipitation*; which name I shall also retain and use.

Out of the *Faces* of distilled *Vinegar*, burnt into Ashes, *Alcaly of Tartar* is elicited by water, and though *It* be produced out of the same Vine with Wine, yet it Precipitates *Mercury*, dissolved as before, sparkling and splendent.

But when the same Alcaly is calcined to Redness with a moist fire, then the same *Mercury* falls like pounded *Cinnabar*.

To the *Tartar* being burnt, if you superadd the *Calx*, and extract the Alcaly with Simple Water, The *Mercury* is Precipitated *Rutilant*. Calx of it self, doth not Precipitate *Mercury* so dissolved, since it is Salt from Acid and Alcaly; and they who against Experience do deny the saltness of *Calx*, are to be reckoned in the number of Fools. But if the Liquor of *Mercury* afore-spoken of, into which a piece of *Calx* hath been injected, be suffered to rest for some hours, so long until the Acid, which contains the dissolved *Mercury*, can suppress *That* in the *Calx*, then indeed *Mercury* is forced to fall by little and little, and to stick round about the *Calx*, like *Minium*; a delightful spectacle to Curious Eyes.

Alcaly extracted from the Herb *Kaly*, being incinerated, doth Precipitate *Mercury* much more obscure than the former.

The *Lixivium*, which Sope-Masters call *Magistra*, which consists of *Calx* and artificial *Alcaly*, yields *Mercury* darkly Yellow.

Out

Out of *Spain* there is brought an Alcaly (whether Simple, or Compound, is uncertain?) yet it Precipitates *Mercury* of a Tauney colour: Theſe Examples concerning Fixed *Alcalyes* (for Sope, and Glaſs) which do admit *Reverberation* in Aſhes neither do eaſily periſh from an acute Flame, may ſuffice; I will add certain Alcalyes in *Phyſick*, which do not bear ſharp *reverberation* in Aſhes, unleſs they be mixed with the former; And Theſe are made of the Herbs called *Cephalickes*, as of *Roſemary*, *Lavender*, *Rue*, &c. all Hot, and of a Grateful Smell. I ſay, all theſe are indeed *Alcalyes*, but not fuſible in Aſhes, for they eaſily fly away, and are therefore *Medicinal*. All theſe, be they never ſo many, do caſt *Mercury* ſo diſſolved into a Reddiſh ſhining Powder.

So alſo *Celandine* affords *Alcaly*, or Precipitates *Mercury* moſt red, ſo that *John Iſack Holland* doth not unskilfully, but excellently and learnedly ſpeak, *He that knows not Salts, will never perform any thing in Art.*

All the foreſaid Alcalyes, as well thoſe burnt by a ſharp Flame for *Sope* and *Nitre*, as the Medicinal ones, from *Cephalick Herbs*, do Precipitate *Mercury* ſo diſſolved (as I have ſaid) of a different colour, a manifeſt Argument, that their Form is not totally conſumed by the Fire, but that they preſerve ſome properties of their Simples, from whence they were extracted; as *Geber* ſays, *Salt retains the property of that thing, from whence it had its Original*: To which the Experience, which I have ſhewn, bears witneſs.

Heretofore I was of opinion, that the difference of Colours in *Sublimate Mercury*, diſſolved as before, and Precipitated by Alcalyes, did proceed from the Fire, acting more or leſs upon the *Alcaly*, but at length, by frequent Experience, I have found my miſtake; for *day to day, and night to night ſheweth Knowledge*: we are not all born *Maſters*, nor can we all be *Lullies*; but Age, frequent Uſe, and Experience do manifeſt the Truth. I have obſerved that *Hippocrates*, and *Galen* alſo, being better informed, did Correct their *Errors*; ſo that it is no ſhame for me, a ſlow-witted Perſon, to amend the miſtakes committed in my youth; eſpecially, ſeeing I had no Fore-

runners,

runners, from whom I might excerp any thing, as they have, who ſeek for Glory in gathering together Receipts; neither had I any other guide, ſave the fountain of all Vertue: ſo that I have bolted out the Truth (by immenſe Meditation and Labour, and not a little Expence) from the fountain of Nature, by my own Induſtry: Wherefore to demonſtrate the conſtancy of Forms, be it known to you, That I can find no better nor ſhorter way, than that which I have ſhewed by the alterations of *Mercury*, upon the affuſion of Alcalyes. For when I endeavour to declare the Forms, with the ſame labour, the Precipitation of *Mercury* doth voluntarily offer and diſcover it ſelf; which yet running, being diſſolved in *Aqua Fortis*, upon the affuſion of Alcaly of *Tartar*, is precipitated into a colour obſcurely Yellow.

All the aforeſaid Precipitated Powders of *Mercury*, are of a *Cauſtick* and *Corroſive* Property, becauſe the *Mercury* aſſumes the nature of that thing with which it is firſt mixed; and the Cauſtickneſs is not waſted off by any Artifice, but by fire alone, as *Hippocrates Chymicus* ſhews.

In like manner, *Mercury* diſſolved in *Aqua Fortis*, and *evaporated* to Siccity, the Fire being encreaſed, that the bottom of the Veſſel may be Red-hot, is made a moſt Red ſparkling Powder, and is called in Phyſick, the *Precipitate of Vigoe*, becauſe *Johan. de Vigoe*, a *Chyrurgeon* of great Fame, was the Inventor of it; on which Red and ſparkling Powder, if you pour Alcaly of *Tartar*, and leave it for an hour, in a warm place, the whole Powder will become obſcurely Yellow, becauſe the Alcaly hath in part abſorbed the Cauſtick Acid left by the *Aqua Fortis*.

The *Precipitate of Vigo.*

The Vertue of this red and ſparkling Precipitate, is ſtrongly, and almoſt without any biting Pain, to abſume and eat up the thicker Sordes of *Ulcers*, *Callous*, *proud Fleſh*, *Impoſthumations* in the *Fundament*, and other like *Exceſcencies*. Yea, it cures all *Sordid*, *Putrid*, *Mattery*, *Callous Shingles*, ſometimes *alone*, ſometime mixed in Plaiſters, or Unguents, as neceſſity requires.

The ſame *Johannes de Vigoe*, made a Plaiſter of *Quick-Mercury*

Mercury, with many other *Anodine Ingredients*, to mitigate the Pains of the Joynts, arising from an inveterate *Lues Venera*, with *happy* success; which to this day retains the *Author*'s Name, and is called, *Vigo*'s *Emplaister of Froggs with Mercury.*

So that *Johannes de Vigo* hath delivered to us; Two Medicaments made of Common *Quick-Mercury*, one Escarotick and Deterging, the other Anodine and Aswaging Pains. He, and with him the whole Senate of *Chyrurgeons*, intimating thereby, That *Anodines* are wholly contrary to *Escaroticks*, yet nevertheless, out of Ambition, Ignorance, or both, They pervert the Text and Meaning of this worthy Man, proving themselves Falsaries in the Law against Him (whose Defence I now take upon me) and they do moreover deride him for Teaching, that the *Mercury* is to be quenched with *Oyl of Bayes* according to Art, and with Spittle; but as out of gross Ignorance, leavened with Insincerity of mind, they have mutilated and defamed my *Hippocrates Chymicus*; so also they have suborned a Sense quite contrary to the intention of the Author; for He boiles this lovely Couple, live *Mercury* dissolved in *Aqua Fortis* with *Vipers Grease* and *Oyl*, till the Aqueous moisture be spent; affirming and giving out, that in boiling, this Causticke is dulcified and made sweet, which is contrary both to Experience and the manifest Truth.

The Anodine Plaister of *Vigo* deform'd into a Causticke.

Now if you desire to have it *sweet*, 'tis enough to extinguish it with Oyl and Spittle, according to the Author's Meaning; or else take *sweet Mercury*, as it is sold in *Apothecaries* shops, for neither of them are touched by Alcalyes, because they have nothing of *acuteneß* in them, as I shall anon Mechanically shew.

I shewed a little before, That *Quick-silver*, or *Live Mercury* (call it as you please) dissolved in *Aqua Fortis*, and precipitated with Alcaly of *Tartar*, doth fall in an obscurely Yellow colour, the Alcaly for the most part absorbing from it the Acid Causticke impressed on it by the *Aqua Fortis*. But in *This* Plaister, the *Mercury* dissolved in *Aqua Fortis*, is *seethed* with *Axungia of Vipers*, to the consumption of the Aqueous Humid, and the Mass be-

becomes of a Grey colour; upon which Maſs if you pour Alcaly of *Tartar*, in the ſpace of half an hour, you ſhall ſee the Alcaly penetrating the Fat, to conſume the *Acid Corroſive* left by the *Aqua Fortis*; and ſo the *Mercury* to be obſcurely Yellow, after the ſame manner, as it happens in *Mercury*, and ſimply diſſolved in *Aqua Fortis* Precipitated according to *Vigo*'s mind. And therefore *Mercury* ſo diſſolved, and boiled with *Axungia*, becomes not *ſweet* at all, as the fooliſh Doctors falſly ſay, but it remains *corroſive*, even by their own confeſſion; for they affirm, *That Mercury diſſolved in Aqua Fortis, by boyling in Axungia, becomes ſweet*, yet afterwards they confeſs, *that Impoſthumations, Putrid Fleſh, and the like, are conſumed by it*; which two Aſſertions are diametrically contrary one to another: This is that which made *Hippocrates* to break forth into a ſmiling laughter, and to ſay, *They know not what they do.* From their Fruits therefore, and Works, you ſhall know them (*i. e.*) the Works of Fire prove true Fire, and *Mercury* conſuming Impoſtumes is true *Precipitate*, becauſe it performes the Operations of *Mercury Precipitate*, as I have ſhewed by their own Confeſſion, and alſo by the affuſion of Alcaly; for they are both obſcurely Yellow, as well the Red *Precipitate* of *Vigo*, as This boiled with *Greaſe* or *Axungia.*

Truly the condition of Mortals is to be lamented, whileſt *Phyſick*, which is the Nobleſt and Famouſeſt of all Sciences, in our days, is ſuffered to be directed by Stupid Ignorants, and for this reaſon it is juſtly proclaimed the *meaneſt of all Arts.*

Do not our Anceſtors, thoſe ſhining Lights of Learning, teach us, That Terreſtrial *Mercury* is as the Cœleſtial? And thoſe things which are in the Superior, are alſo in the Inferior World? And to what Planet *Mercury* is joyned (*i. e.*) to what Vertue it is united, it takes upon it the nature of the ſame, ſince it is pregnant with the ſeeds of all things.

Precipitate *Mercury*, Cauſtick.

Johannes de Vigo did conſider Terreſtrial *Mercury*, as Cauſtick, whence by the advice of his Predeceſſors, he joyned it with an Earthly Planet, whoſe Vertue was Fiery and Cauſtick; it embraced the nature of This, and be-

became Caustick, according to the Doctrine of the Ancients, and is called the *Precipitate Mercury of Vigo*.

The same *Vigo* wanted a *Terrestrial Anodine of Mercury*, whence also, following the same Doctrine of the Ancients, he joyned it with Anodine things, viz. *Greases*, or *Suets*, *Oyles*, *Froggs*, whose nature it assumed, and became *Anodine*.

So that *Mercury* takes the form of That, by which it is dissolved, and it is mingled with it, as I have shewed clearly enough, concerning the Alcalyes of *Vegetables*. *He that hath Ears to hear, let him hear.*

Hence it appears, That the Inventor of the *Precipitate*, and also of the *Anodine* Plaister (whether it were *Vigo*, or any one else, it is not my part to enquire in this place) was not only a Man of Experience, but an Understander also of the Causes of Things, and consequently a *Wise Man*; So that it is a piece of frivolous and absurd Ignorance, and Fanatick Dotage, to go about to *reform* actions of knowing Persons; Out of my pitty to such Undertakers, I shall do them the best service to bury this their insipid Discourse, in perpetual silence, lest they should be exposed to the laughter and derision of Fresh-Water *Apothecaries*, yea of the Vulgar it self: I wish they would learn hereafter, what they know not, before they babble forth their Scurrilities against the Truth, and the Ancient *Hippocratical* Doctrine of *Physick*. At this game I confess *you* are superior to me, for you know how to paint and set forth the fooleries of men, so neatly, that in this art I must needs lay down the Bucklers. But that your disease may not be *Chronical*, pray have a care how you often vomit out such things?

Moreover *Mercury Precipitate*, now made Caustick by the *Aqua Fortis*, for consuming Putrid Flesh, as all Skilful *Chyrurgeons* acknowledge, may be mixed, as Exigency requires, with any Oyntment. To what purpose then is this *Anodine* composition with Precipitate? especially in Countries where *Vipers grease* is sold dearer than Gold? whence this Grease is not only mixed with the *Precipitate* against the intent of the Inventor, but moreover is odious and troublesome to *Apothecaries* (especially since

Hogs-greaſe will do as well with *precipitate*) as alſo unprofitable to the Sick.

You have now heard, O ye Truth-reſpecting hearers, on what ground this *Plaiſter of Froggs*, with *Mercury*, hath been *reformed*. It is your part, to judge whether that ingenious Perſon, *John de Vigo*, deſerves to be contumeliouſly Reproached for this? And, whether That barren, inſipid, and truthleſs Doctrine be to be ſuffered, which Rails againſt both the order of Nature, and alſo the wiſe inſtitutions of our Anceſtors? by which, hopeful Youth in tender years being ſeaſoned, the Poyſon of Ignorance and Unskilfulneſs grows up with them, and ſo the wound becomes Incurable. But theſe things, were not of ſo great moment, if the Health of Man were not endangered thereby; for they preſcribe to the Sick, *Simple* water for Cordial, *Vinegar* for an Epileptick Remedy, Cauſticks for Anodines; Poyſon of *Copper* for a wholſome Medicine. Sick and weak Perſons can hope for no Cure from ſuch men, but only a fooliſh profuſion of their money, and at length the loſs of their lives to boot: Let them then avaunt, and be packing to the fartheſt *Garamantes*, with their *Spirit of Venus*, and their *Counterfeit receits*; Let them not trouble the Civil World; Let them *there weep*, like Women, ſince *here* they have not acquitted themſelves like Men.

Sublimate Mercury.

Order now requires, that I ſhould ſhew what *Mercury* Sublimated is? ſince I have laid *That* down, as an Inſtrument in the examen of of Alcalyes? How *It* is Prepared, *Hippoc. Chym.* ſhews *chap.* 29. Where obſerve, that *Vitriol* Rubefied, or Calcined to Redneſs, is not added, to encreaſe the weight of the *Mercury* (as theſe magnifick Maſters with their Parrizans, do ſuppoſe) for then it would not be calcined to the higheſt Red, but to Whiteneſs only, as is done in the diſtillation of *Vitriol*, whoſe *Caput Mortuum*, left after diſtillation of the Spirit, is moſt fit for this purpoſe; and therefore we need not its *Spirit* to add weight to the *Mercury*) but it is added, that the Sulphureous *Nitre* might apprehend the Sulphur of the immature Metal, lying hid in the Rubefied *Vitriol*, as I have ſhewed before; and ſo by their joynt-forces they

they may dissolve the *Mercury*. This is the reason why Rubefied *Vitriol* is required. But the quantity is Quadruple in respect of the Salts, because These are of easie fusion in the Fire, from the which by Rubefied *Vitriol*, they are preserved: see more in *Hippoc. Chymic.* in the fore-cited *chapter*.

The same *Mercury* once sublimated, needs not again be re-sublimated with new Powders, as the unskilful *Approvers* think, because it doth not put off or depose the Acid Spirits once absorbed, so as to stand in need to reassume the same from new Powders: and suppose that it were sublimated an hundred times with new Powder, yet it would never become purer, as they falsly affirm; the reason is, because this way the External Sulphur is not separated, neither doth *Suscipere magis velminus*, although (*Legitimately*, as they say) a thousand, yea an hundred thousand times it be resublimated; And the word *Legitimately* in this place, doth discover their gross ignorance, and stands for no other use, but to be nauseous to the understandings of Wise-Men; but it receives as much as is enough for its saturation, as they know well, who have sometimes dissolved *Mercury* in *Aqua Fortis*; which if it be not sufficiently Powerful, the Grain of *Mercury* remains untouched and quick, because it could not imbibe That which was not; and on the other side, the water could not dissolve it, because it wanted Acid Salt. Truly this word (*Legitimate*) with this (*pure Mercury*) and the rest of their falsse Receits may well enough be discarded and abandoned even by the Purest *Apothecaries*, But when sublimate *Mercury* is freed from the Acid Spirits by Vegetable Alcaly, and is fetched back quite from the Retort, then indeed it may be mixed with new Powders, and again sublimated; which way the Deans with their fellows are yet ignorant of: yet nevertheless it would not become *more pure* and *splendant*, because in its first sublimation it neglected all that, which was not of its own nature in the Fæces and *Caput Mortuum*: but it would come over and return in less quantity, because it would return to Elements by frequent sublimation and revivification, as I have shewed above concerning Alcaly

The Revivification of Sublimate or Precipitate *Mercury*.

of *Tartar*, concerning Spirit of *Vitriol*, and concerning *Vinegar*: see *Hippoc. Chym. chap.* 10.

This foresaid mixture of *Mercury* with Rubefied *Vitriol*, *Nitre*, and *Salt*, if you sublime it, not by little and little, but in great haste, and more than is fit; the *Mercury* will concrete, in the top of the *Caput Mortuum*, into lucid and great Chrystals, like *Nitre*, and not inferior to a Diamond in lustre, which these Babblers vaunt for a great Secret, and affirm it to be *The purest Mercury*. For whom the speech of *Mercury* in *Sendivogius* may well be applied, *That 'tis natural for him to laugh at fools*; which Disease, as *Cardan* says, they may easily Cure without a Cudgel, by eating Hens brains, the Testicles of Doves and Tortoises, and by drinking a little White-wine Vinegar every day: If *Cardan* had had any knowledge of this child of *Venus* (newly born to these Obstreperous *Doctors*) perhaps he would have *preferred* it before *Vinegar*, *since duly exhibited*, *it cures Epileptick and Melancholy persons*, witness the Physical Doctors of the *Austerian* and *Norimberg* Colledge. In the interim let their humours be purged with black *Hellebore*, would all *Anticyra* had enough of it; Let them drink *Capon-broth*, and smell to the flowers of *Nymphæa*, which, with their grateful smell do mightily chear the spirits of the Heart, and engrave *Aristotle* in a Topaze, walking *Tempe*. Hitherto *Cardan*, to which I add, that unless these overwise Doctors, with their fellows had approved and owned this *child of Venus*; the simplest man alive would never have believed there was ever any such thing. But lo, I communicate to you, this great Artifice *gratis*.

To conclude therefore, I affirm, that neither *Mercury* sublimated, or precipitated, ill handled with *Vipers-grease*, and mortified in *Aqua Fortis*, and also mixed with *Alcalyes*, and Revivificated with a naked fire out of a Retort, and by consequence, weak and frail, as *Alcalyes*, nor no other *Matter*, can be so destroyed, but it will still shew something of its Form.

CHAP.

CHAP. VIII.

That Acid *doth both Destroy and Perfect, and that the* Fire, *the* Sun, *and* Acid, *have the same Vertues and Powers.*

I Have shewed in the beginning, *Chap. 2d.* both by Authority and Experience, That Nature hath endued *Seeds* with the least part of Acidity, because of themselves they receive Increase, and are multiplied; as appears manifestly in a grain of Corn, the quantity of whose natural Acid, is computed to be the 8200. part, in respect of its Body, as the *Sages* of Natures Mysteries teach us: But if it be macerated with any mollifying Humour, with the addition of a convenient Heat, the innate spark of its Acid, is excited, which doth so distend and enlarge it self, that it seems evidently to be moved out of its place, and by this Expansive Motion it doth compress and overcome its *Sister*, whom it loves, (*i. e.*) as well the Alcaly of its own body, as That which it drew from the Water, and turns it into its own Nature) that is, into *Acid*: I call this motion, as both the Vulgar and Philosophers do, *Fermentation*; so out of *Barley*, which according to *Hippocrates*, is of a *cold* nature, there is made not only a temperate, but an inebriating Drink, called *Ale*, or *Beer*; out of which, by the Art of Distillation, there is elicited *Aqua Ardens* (which, before *Fermentation*, was not in the *Barley*) nothing inferior to Spirit of Wine, yea though it be inflamable, as *Hippoc. Chymic.* shews *chap.* 18. but the innate *Acid* is multiplied, either of its own accord, or by Art, *viz.* by the addition of its like Acid, which by reason of its similitude is easily admitted (like being pleased with like) and which, by a common name we call *Ferment*; but if we would excite that small portion of Acid, innate in the Grain,

Grain, by an Acid, not of the ſame *nature* but having a mineral *Soul*, as for Example, by the Acid of *Vitriol*, *Nitre*, *Salt*, or the like, then the more generous and Potent would ſurpaſs the weaker, and would choake it, which not enduring the yoke of Tyranny, would be quite deſtroyed and converted into nothing.

So a Pearl poſſeſſes, in reſpect of its body, the 8200. part of innate moſt precious Acid, upon which, if there *ſupervene* a more powerful Acid, taken from another family, *viz.* from *Vinegar* diſtilled from *Æruge* (which they ridiculouſly call a *Secret Menſtruum*) and doth exercíſe Tyranny over it, The *Rector* in the Pearl is ſuppreſſed, and that clear and precious light, the Child of the Sun, is ſlain, which would willingly have relieved the Vital *Lumen* of the Sick, unleſs it had been unjuſtly ſubjugated by the Vinegar from *Verdigreaſe*, that is, the *falſe Spirit of Venus*. Pearl therefore, ſo diſſolved, can do no good, unleſs the weak Stomach of the Patient can ſubdue and conquer that Acid Salt (as I have before ſhewed in magiſtery of Corals) left there by the *Vinegar*. For as *Vinegar* diſtilled from *Verdigreaſe*, doth rule over, and ſubdue the vital *light* of Pearls, 'tis ſo in Diſeaſes, *viz.* The Vital *light* is ſuppreſſed by the more Potent Morbous *Acid* (as *Hippocrates* ſays, *De veteri Medicinâ*) which if it be imbibed, as the Acid by the Alcaly, or if it be diluted and ſeparated from the affected place, the Vital *light* ſoon recovers: ſee *Hippoc. Chym. c. chap.* 21. Hence aroſe that Famous ſaying, which is no leſs true in *Philoſophy*, than in *Divinity*; *The fear of the Lord is the beginning of Wiſdom*; which is as much as to ſay, Do thou not deſtroy Acids by Acids, againſt the command of the moſt High, but ſweetly and lovingly cheriſh them, ſo ſhalt thou be Wiſe, as ſaith our Lord himſelf; a grain of Corn falling upon looſe and ſpongy earth (not upon that which is hard bound, which depreſſes even the innate *light* (and therefore muſt be plowed and turned up) is there diſſolved and loſeth its exterior ſhape, yet its innate *light* ſuffers not, but in its own time produceth fruits like it ſelf; neither is it diſſipated, becauſe the *Suns* Child doth extend it ſelf in ſpongy earth, and embraces its *Siſter*

Alcaly,

Alcaly, which it loves, which being impregnated, attracts Nourishment from That, of which both of them do consist, and so both of them together produce fruits like themselves. This natural Operation and Process is the fear of the Lord and the beginning of Wisdom.

But when a grain of Corn is cast into Fire (*i. e.*) into a more powerful Acid, not agreeable to its own Nature, but taken from another family, or into Sulphurous earth, or into *Counterfeit Spirit of Venus*; then is there committed a sin of Disobedience against the command of God; and the Grain, as well in Matter as Form, is corrupted, dissipated, and made unprofitable both for *Generation* and *Fermentation*; as I have before shewed in Pearl dissolved in *Vinegar*: so the fear of God, is not regarded, and instead of the beginning of Wisdom, there grows up the beginning of Folly; where we may observe, that as the Acid innate in the Grain, doth act by Fermentation, and multiply it self, either in vertue or number; so also Fire, which is Acid, inflamed, doth act as *ferment*; and never gives over, till it finds something on which it might act, after the manner of *ferment*, or might make it like, or equal to it self.

Fire is the inflamation of the Acid Ferment.

So that whatsoever is dissolved in an Acid, out of its own family, or more powerful than its innate Acid, presently its weak Acid is suppress'd, and being dissolved, it must needs take upon it the nature of the Dissolvent; for the Acid in dissolving, is coagulated and imbibed by the innate Alcaly of the Thing, and the weight of the same Thing is encreased by the dissolvent Acid; as I have shewed above concerning the counterfeit Child of *Venus*, acting upon Corals; and in my *Hippoc. Chymicus*, concerning Sublimate *Mercury*. I say, they all encrease in weight from the External Acid, which to the utmost of its power doth suppress and kill the Internal; and that not only in the *Via humida*, as I have shewed, but in the *Sicca*, fiery, and burning way. An Example whereof may be seen in the following Experiment.

Lead, to the weight of 100 Drachms, being burnt in a reverberatory flame of dry Wood into Powder, which is very Red (for the weak Acid of the *Lead* is suppressed by

Preparation of *Minium*.

by the imperious Acid kindled Flame; and it loſes the name of *Lead*, and the Figure too; and again puts on a fiery Colour, and is called from its ſhining Redneſs, by means of the maſtering Acid, *Minium*. Weigh this in a ballance, and you ſhall find the *Minium* encreaſed ten drachms from the kindled Flame; for as in the *moiſt way*, Corals diſſolved in falſe Spirit of *Venus*, and coagulated, do receive an augmentation; ſo alſo *Lead*, in the *dry* and *fiery* way, is encreaſed and augmented from the Acid in the flame; *Hippoc. Chymic. chap.* 26. For there is the ſame reaſon in both, which, the *Deans* with their Fellows cannot comprehend; and that makes them cry out, *That the encreaſe of ten drachms in the* Minium, *doth not proceed from the Acid out of the kindled flame, but from the Air.* What do your Doctorſhips ſay? From the Air! whether will ye go? ſtrait to *Anticyra*, I adviſe you, with the company going before you for your Cure. For Philoſophers ſay, that Air is Natures *Sieve*, through which Vertues and Influences are tranſmitted, and that it is impatient of a *Vacuum*, no ways condenſable of it ſelf, but an immortal and moſt ſubtil Fume, kindled from the heavenly Fire, *&c.* I have ſhewed before, that in *It*, the *Sun*'s Child doth inhabit, which, aſſumes not a Body, unleſs with his beloved Siſter; The authority and experience both of the Old, and alſo the Modern true Philoſophers bear witneſs hereunto: So that the Air being moſt ſubtil and incondenſible of it ſelf, can add no weight to the *Minium*.

The Air it ſelf, is neither light nor heavy, neither is it compreſſed of its own accord, but by ſome force, in the barrel of a Gun, from which it again breaks out by force: we ſee the ſame thing in that Glaſſy *Organ*, which is called a *Weather-glaſs*, the Air indeed is compreſſed in it, by *Cold*, but is again rarefied and dilated by *Heat*. If therefore the Air, in a *cold* ſeaſon, did add weight to the *Minium*, it would make it lighter in an *hot*: But *Minium* weighs alike in all Seaſons; ſo that it is not the *Air* that gives weight to the *Minium*.

But ſuppoſing, though not granting, that the Child of the *Sun*, dwelling in the Air, did aſſume a body in the

the *Minium*; yet this would not be, but in ſome years ſpace; as I have ſhewed in the Matrix of *Nitre* and Mines of *Vitriol*. But *Minium*, newly drawn out from the Furnace and as yet hot, weighs as much as it will do ſome years after; ſo that the Child of the *Sun*, neither hath any Tabernacle in the *Minium*, nor gives any weight to it.

The Air being impatient of a *Vacuum*, as I have ſhewed by the authority of Philoſophers, is always filled with an Aqueous Humour, which in the cold preſently concretes to Water. Take a familiar houſhold example, when we drink cold things in the hot Summer-time, out of a Glaſs, as ſoon as the Glaſs is filled with the cold Liquor, preſently it is troubled, becauſe the Aqueous Vapor, diſperſed through the Air, is condenſed by the Cold, and ſticks there, in ſo great quantity, that ſometimes drops do fall down: Here they wonderfully lift up their Creſts, and cry aloud rejoycingly, *Now you are catched*; This is that Aqueous Vapor, which is attracted by the *Minium* out of the Air, and adds the weight to it; but ſoft and fair, Your Aqueous Vapor doth concrete in *Cold*, and again rarefy in *hot* Weather, which your ridiculous and childiſh Experiment proves, *viz. The Caput Mortuum of Vitriol* (*i.e.* the Fæx of *Vitriol*; out of which the Spirits by one ſingle diſtillation, have been drawn) *being expoſed to the Air, is again ſaturated with Spirit of Vitriol; which, if it be diſtilled, doth again yield Spirit.*

Lo, O Curious and Truth-loving *Reader*, This is their Proof (that as the *Caput Mortuum* of *Vitriol* is again ſatiated with Spirit in the Air; ſo alſo *Minium* drawn from the Furnace, is ſaturated out of the Air with weight) which is both Childiſh and Ridiculous; and, as I have ſhewed all the reſt to be falſe, and ill underſtood, ſo I ſhall likewiſe demonſtrate *This* to be moſt falſe, and leaſt of all underſtood by the whole *Colledge* of Gueſſers.

For if *Vitriol* have once undergone the tyranny of a quick Fire, the Child of the *Sun* acts no more upon it, than it doth on an Egg boiled, for the hatching of the Chick: Now burnt *Vitriol* doth attract from the Air by reaſon of its drineſs, becauſe it is without moiſture, not the Acid

Spirit of *Vitriol*, but an Aqueous Vapor; which, when the *Vitriol* grows hot, either by the *Sun*, or by Fire, again flies into Air, as it is the property of all Water. For if that *Caput Mortuum* could again re-assume the nature of *Vitriol* in the Air, that Famous Distiller of *Spirit of Vitriol* at *Amsterdam*, who furnishes not only near the third part of *Europe*, but also all Ships, and both the *Indies* therewith, yearly expending many thousands of pounds upon it; if it being once Distilled and Exposed to the Air, would again become *Vitriol*, he would have luck in a Bag, as we say: but as it is false, that the *Caput Mortuum* of *Vitriol* returns to *Vitriol*, so it is also an untruth, that the Aqueous Vapor adds weight to the *Minium*; which I prove by this Experiment.

Take at least an Ounce of *Minium*, such as is commonly sold, and in a Glazed Earthen Vessel, large and low, put it for a Night in a Bakers hot Oven, or else expose it to the Noon-day Sun; whose heat as it doth exiccate not only the *Humid Minium*, but also dries up Marishes, Lakes, and Rivers; so in like manner it would expel the Humidity of the Air, if there were any in the *Minium*: but the same weight of *Minium* which was put in, is also drawn forth from the Oven, or heat of the Sun; so that That which gives weight to the *Minium*, is not the Child of the Sun, nor the Air, nor Water; therefore, against the absurd prateing of the *Deans* and *Approvers*, it must needs be the *Acidity* in the kindled Flame, which, as the false Spirit of *Venus* exercising tyranny over the Debile Acid in the *Medulla* of Pearls, or in Coral, adds weight to Them, so also the *Acid* kindled in the Flame, which by its tyrannical power and force doth keep down and suppress the Debile Acid in the Lead, is fixed into Alcaly, rules over it, and gives weight to it; *Hippoc. Chymic.* Chap. 26.

We may learn from hence, that if the Reader (whosoever he be, enquiring after the truth, in those infinite doubts, which in long Art do daily occur) should have recourse to these *Deans* and their *Associates*, what profit could he get thereby? Surely none, which plainly appears, by that counterfeit and lamentable piece of Science, which they hand forth to the whole World, for they call *Simple Water*,

Water Volatile Salt of Tartar, and moreover judge it an incomparable Cordial. Besides, with what pompous and swelling Words, do they shamelesly adorn it? and commend it to their poor Neighbours, and to the Sick? as I have shewed above in the Chapter of the *Difference of Salts*, in their own Words there quoted: They say also, *That Vinegar Distilled is the Son of* Venus, *that Acid is not in Graines of Kermes*, that *Gold is not Fixed and Constant in the Fire*; that Mercury *corroded with Caustick Water is made sweet by boiling with Vipers Grease*; that Minium *acquires weight from the Air*; and infinite other absurdities, which I shall anon discover. Fye for shame, defile not Youth, with these fooleries and falsities: Dispute not *de Lana Caprina*, and after the dispute ended, you silence your Opponents in a matter of no value, and gain nothing but an empty puff of breath: And then in your silence, Truth, as the Philosopher says, though unsought for, will come to light, if she may. But, leaving these Jejune Interpreters of Physick, who proceed to the Practick Part, as the Ass to his fodder, not knowing to what he lays his Lips; I shall go on to prove, that there is *Acid* in Fire, by This, no less Noble, than profitable and pleasant Example.

I shewed before, That the Salts of Vegetables do preserve their forms untouched from Common Fire, and that they illude the violence thereof, either more or less: And if such a power be in Vegetables, must not the Mineral family attain a degree thereof, more or less perfect? To make this out, Let Flint be the Example, which is most constant in the Fire, and Corals (the Red are always to be chosen) less constant: A Flint (the White is to be chosen) is corroded by no *Acid Liquor*, no not by *Aqua Fortis* it self; because it hath obtained a Temperament equal to its Nature (*i. e.*) it hath got so much Acid, as in a just Ballance can satisfie and saturate its Alcaly; for if never so little Alcaly did superabound, the External Acid would find an easie ingress; so that a Flint can be dissolved by no Acid, no not by *the false Son of Venus*, in regard of the equal and perfect mixture of the Acid and Alcaly.

An Enquiry how Flint differs from Corals.

Spirit of *Vitriol*, but an Aqueous Vapor; which, when the *Vitriol* grows hot, either by the *Sun*, or by Fire, again flies into Air, as it is the property of all Water. For if that *Caput Mortuum* could again re-assume the nature of *Vitriol* in the Air, that Famous Distiller of *Spirit of Vitriol* at *Amsterdam*, who furnishes not only near the third part of *Europe*, but also all Ships, and both the *Indies* therewith, yearly expending many thousands of pounds upon it; if it being once Distilled and Exposed to the Air, would again become *Vitriol*, he would have luck in a Bag, as we say: but as it is false, that the *Caput Mortuum* of *Vitriol* returns to *Vitriol*, so it is also an untruth, that the Aqueous Vapor adds weight to the *Minium*; which I prove by this Experiment.

Take at least an Ounce of *Minium*, such as is commonly sold, and in a Glazed Earthen Vessel, large and low, put it for a Night in a Bakers hot Oven, or else expose it to the Noon-day Sun; whose heat as it doth exiccate not only the *Humid Minium*, but also dries up Marishes, Lakes, and Rivers; so in like manner it would expel the Humidity of the Air, if there were any in the *Minium*: but the same weight of *Minium* which was put in, is also drawn forth from the Oven, or heat of the Sun; so that That which gives weight to the *Minium*, is not the Child of the Sun, nor the Air, nor Water; therefore, against the absurd prateing of the *Deans* and *Approvers*, it must needs be the *Acidity* in the kindled Flame, which, as the false Spirit of *Venus* exercising tyranny over the Debile Acid in the *Medulla* of Pearls, or in Coral, adds weight to Them, so also the *Acid* kindled in the Flame, which by its tyrannical power and force doth keep down and suppress the Debile Acid in the Lead, is fixed into Alcaly, rules over it, and gives weight to it; *Hippoc. Chymic.* Chap. 26.

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An Enquiry how Flint differs from Corals.

But Corals, not being enriched by Nature, with ſo much Acid, as can ſaturate their own proper Alcaly, are therefore leſs Conſtant; whence it come to paſs, that if you pour any manifeſt Acid on Them, preſently it corrodes them; and ſuch a quanty of the Acid is imbibed by them, till it be brought to an *Æquilibrium* with the Alcaly, and thereupon the diſſolved Corals be encreaſed in weight, as I have ſhewed before in *Magiſtery* prepared the common way.

A Flint burnt in the Fire, as it receives not *Acid* and *Humid* Liquors, ſo it is neither encreaſed nor leſſened in its weight from the *Acid* Flame of the Fire, becauſe *Acid*, which may avolate, doth not ſuperabound in it; nor is the Alcaly thirſty, which might imbibe the *Acid Salt* of the Corals, or *Aqua Fortis*, 'tis only the Nutritive Glew which dies; which in Pearls and Crabs Eyes (as I have ſhewed) is like to thin Pellicles or Coverings, which are not diſſolved by the falſe Spirit of *Venus*, becauſe they are *Pinguous*. But Corals duly burnt, (in the Flame either of Coals or Wood) do encreaſe in weight, becauſe there is an overplus of the thirſty *Alcaly* in them, which could not be ſaturated by their proper *Acid*: hence it is, that they eaſily admit the External, either humid or kindled in Flame, and ſo far, by means of the received *Acid*, they encreaſe in weight; as I have ſhewed before in *Magiſtery*.

Flint burnt in Fire, till it chop and gape, becomes Cauſtick, and turns living or dead Fleſh into rottenneſs.

But Corals in like manner burnt or calcined in the Fire, till they chop, do not affect either *living* Fleſh or *dead*, becauſe they become a Powder almoſt inſipid.

Burnt Flint is called *Lime.*

Flint burnt, until the Glew (*i. e.*) the Aliment dies, is called *Calx* or Lime, which, being yet freſh, grows hot with Water poured on it, and its *Acid* Acts upon its powerful and proper *Alcaly*; and they are both turned into a ſtony or petrous ſubſtance, which coagulates with it, whatſoever it layes hold off.

Remember that They grow in the bottom of the Sea.

Corals duly burnt for ſix days and nights, till the Aliment die in a flame of Wood, or Coals, do increaſe in weight; they grow not hot upon the affuſion of Wa-

ter,

ter, becauſe they have not ſo much *Acid*, as will ſuffice for a mutual Action or Combate, neither is it coagulated into a ſtony ſubſtance.

Out of Flint, Calcined with Vegetable Alcaly, is extracted a *Lixivium*, which boiled with Suet or Fat, becomes *Sope*.

If *Alcaly* of Vegetables be added to Calcined Corals, The *Alcaly* extracts from them the *Acid* drawn from the Flame, and the Corals fall into a White Inſipid *Powder*. Pour Diſtilled Vinegar on Calcined Flint, and the Vinegar diſſolves its *Alcaly* with bubbles and hiſſing.

But if you pour the ſame Vinegar on theſe Calcined Corals, they are wholly diſſolved, without either bubbles or noiſe, becauſe being ſaturated for ſix days and nights by the Acid Flame, they are no longer Thirſty: on which Solution, pour *True Spirit of Vitriol*, which (as I have ſhewed before) doth keep down the weaker *Acid* of the Diſtilled Vinegar, and aſſociates to its ſelf the *Alcaly* of Corals; but the Fire, or Life of the Corals is united with the Vinegar, and ſo the whole Compoſition is *Red*. This Redneſs is the Life of Corals, according to *Paracelſus*, which you may learn to ſeparate by the Midwifry of your helping Hand, and you ſhall have a Cordial not to be deſpiſed; of which *Plato* forbids me to ſpeak any more in this place: See *Hippoc. Chymic.* Chap. 27.

As the Life, or the Acid of Flints, is White, or Dark Colour, or Green, intended according to the innate *humid*, as Vitrification ſhews; ſo of *Red* Corals it is *ſparkling*, which difference of Colours and Vertues proceeds from their firſt Seed, which Art cannot effect; if any one pretend to it, he is a Lyer. But to bring the Seeds to Maturity, that they may produce the Fruits, this is a priviledge granted to Philoſophers, not to Ideots.

So that our Calcined Corals become not a *Calx*, becauſe they have not the properties of *Calx*, as the ridiculous and putid Flock of vain *Doctors* do ignorantly affirm; *for Corals are as much eſteemed by the* Indians, *as* Indian *Pearls are by us*: Wherefore Corals and their Bodies (as all other Jewels, which take their forms from the

Corals calcined become not a *Calx*.

The Vertues of the Tincture of Corals.

the Limpid Fountains of the Heaven and the Sun) are made of the pureſt Drops, impregnated with Cœleſtial Influences; hence it is, that they contain many and excellent Vertues in them, which, if any one deſire to draw forth, he muſt approach nearer, and open the locked doors, otherwiſe than by begging Receipts (and Thoſe ill underſtood) as it were from door to door, or by preſcribing *quid pro quo* to the Sick, or by a petulant blemiſhing of the Truth, by raging and unheard off Maledicence. But the Ignorant Vulgar hath this ſottiſh property, that what it doth not underſtand at firſt reading, That it contemns and loads with fœtid Calumnies; And yet herein it judges it ſelf not *Ignorant*, but very *Wiſe*; but by this very thing they manifeſt their folly to the *truely Wiſe*, when to their own followers they would ſeem to be *Wiſe*; for 'tis a wretched thing, in endeavouring to procure a Name to ones ſelf, to be expoſed, as a Ridicle, to all underſtanding Perſons.

The Martigenous Hornets provoke and challenge the Eagle. Take notice, Brethren of the woful Combate.

Iron what?

Having hitherto proved that *Acid* doth both deſtroy and alſo perfect, it is a Subject agreeable to this Chapter, to treat of the Deſtruction of *Iron*: That Iron differs from all other Mettals, it appears by its terreous Principles, whence the *Acid* thereof, wanting its Siſter *Alcaly*, dwels in an earthly moſt inconſtant matter; wherefore it vaniſhes of its own accord, or its innate Acid is eaſily oppreſſed by an external Acid ſupervening; and ſo the whole ſubſtance of Iron is turned to *ruſt*. *Hippocrates* took notice of this Volatile Acid of Iron, hence he teaches in his Tract *De Diæta*, that when it is quenched in Water, it acquires Strength; becauſe the Light Alcaly in the Water, is a True Comforter of the Light Acid in the Iron: and Curlers do ſtrengthen It with the Alcaly of Animals, which is alſo Volatile, as *Hippocrates Chymic.* ſhews, Chap. 19. For this cauſe *Ariſtotle* the 4. *Meteorol.* not without Reaſon, makes a difference betwixt *Iron* and all other *Metals*. *Gold*, ſays he, *Silver, Braſs, Tyn, Lead, Quick-ſilver, belong to Water; but Iron to the earth:* and *Galen* ſays, 4. *de Facult. Simplic. Medicament.*

cament. That Iron is a terreous and craſs Body, &c.

So that the *Acid* degenerating or dying of its own accord, or being ſeparated by the ſtronger, there remains only the terreous principle (as *Hippoc. Chymic.* ſhews of *Alcaly of Tartar* Chap. 10.) which by the Ancients and by Practicers of Phyſick, as *Dioſcorides* witneſſeth, is called *Ruſt*. Ruſt is natural *Crocus Martis*.

This *Rubigo* is alſo prepared by Art, out of the duſt or fileings of Iron, when the ſharpeſt Vinegar is poured on it, and it is dried in the Sun, and again afterwards dipped in Vinegar and dried; then it muſt be waſhed with common water and dried; and ſo kept powdered and ſmall.

And as Vinegar, ſo alſo all ſorts of Acids, do turn Iron into *Rubigo*; yea Gold it ſelf doth occultly and preſently turn that Acid into *Ruſt*, as I have ſhewed Chap. 2. *Gold* turns *Iron* into *Crocus* or *Rubigo*.

Hence we ſee the Cauſe why Gold cannot be conglutinated with Iron, unleſs it firſt aſſumes a *Cupreous* Nature, as *Hippoc. Chymic. boldly* ſhews, Chap. 28. concerning the *Golden Nail*; for the Truth offends none, but thoſe that hate it. A Golden Nail.

The Lord *Anbert*, a Noble man of *France*, in his Natural and Moral Hiſtory of the *American* Iſlands, proves by Eye Witneſſes, that the *Unicorn* is not a four-footed Animal, but a *Fiſh*, that hath an Horn growing in his Forehead; yet he grievouſly offended, not the Lovers of Truth, but thoſe only who made a *Monopoly* of thoſe *Hornes*: ſo I never read that *Moraliſts*, or *Politicians* did envy the Truth, though Hoarſe *Graſs-hoppers* chirp againſt it, and the *Cuckows* ſubſcribe and approve their Note. He that is affraid of the Truth, is not *perfect*; for an *Adept*, or one compleatly Wiſe, ſhould fear nothing. For which Cauſe, I was always willing, that *my Hippoc. Chymic.* ſhould ſpeak the Truth out and not conceal it, not fearing any thing nor reſpecting either the friendſhip or hatred of any Sect; but that it ſhould give things their proper Names, not being ſolicitous either to offend or pleaſe: in imitation of *Thucydides*, who perceiving the Writings of *Herodotus* to be in great eſteem, *I had rather*, ſayes he, *diſpleaſe by ſpeaking the truth, than pleaſe by relating Fables; becauſe by diſpleaſing I gain, but by pleaſing I hurt.* But I return whence I digreſſed. This moſt ancient *Ruſt* of The Unicorn. *Hippoc. Chymic.* a Truth-ſpeaking Book.

Iron

The invention of *Crocus Martis*.

Iron, that it might be more pleaſant to the Eye, the *Curious* began to burn it in an acute Flame, into a ſmall Powder, and from its fair redneſs, they call it *Crocus Martis*.

But uſe, age, and experience, being our daily Inſtructors, they obſerved, That This is a long and tedious way of turning Iron into *Ruſt* by the aſperſion of *Vinegar*; therefore they burnt the duſt or Filings of Iron in an acute Flame, the acidity whereof being ſet on fire, they found they could make more of this light and rare red Powder in a day, than they could do with Vinegar in a month; ſo that they rejected the *long* and tedious, and took to the *quicker* way of operation: This Powder they called *Crocus Martis* from its redneſs.

Crocus Martis curiouſly prepared, doth open and aſtringe.

So that Filings or *Scobs* of Iron, or its Natural or Artificial Ruſt, either with Vinegar eroded, and afterward reverberated in the Flame, or elſe without Vinegar by Flame ſimply, or with Vinegar from *Ærugo*, or *Falſe Spirit of Venus*, being converted into a red Powder or Liquor (for it is all one) and taken by the Mouth, have a *ſtrengthening* Vertue, ſo that They are good for the Stomack and for a Looſe Liver, for Dyſentericks and Lientericks, and all moiſt or præhumid Diſeaſes; for Womens Flux, for the Gonorrhæa, or incontinency of Urine, and all ſolutive Diſtempers. And the ſame *Iron* performs alſo contrary operations, for it opens great præhumid Livers and their Obſtructions, it promotes Womens Terms (ſo that it hath reſtored *ſome Girles* (I ſay not *all*) who were diſcoloured by paleneſs, to their Health and Beauty;) and therefore both Philoſophers and Phiſicians do unanimouſly teach, that Iron of it ſelf doth both *open* and *bind*: Experience alſo ſhews as much, which is, and ought to be accounted the *Beſt School-miſtriſs* to us all.

It wants not therefore the ſuſpicion of fraud or ignorance, when men ſhall paſſionately, yet weakly affirm, That Iron, from its ſingle preparation, is either *aſtringent* or *aperitive*: They ſhould live and die in their ignorance for me, unleſs ſick perſons were in danger to be ruined thereby: Learn therefore, not from Me, who have alwayes undervalued vain applauſe, but from the *Giver*

of

of all good, for frequent experience, and the company of dexterous Philoſophers, and true Practicioners are more to be believed than either an handful of Calumniators, or a multitude of ſuch, who are ignorant of the Inſtruments of Phyſick.

What Diſeaſes *Crocus Martis* is not good for

Now they who commend *Iron* in all Diſeaſes, and do preſcribe it in every *Dropſie*, in the *Schirrhus* of the Liver, in an inveterate Jaundice, eſpecially joyned with a Feavor, in *Hypochondriack Melancholy*, or in Diſeaſes of the Stomach. They do it not, without the extream Peril of the Patient; 'Tis true, *Iron* is very good for great Livers, looſned with moiſture, and tumid, but when they are hardened to a *Schirrhus*, it is ſo far from diſſolving it, that it rather confirms it, and by conſuming its *Acid* producer, drives it to a Lapideous hardneſs; ſo that *Iron* either Filed or any other way turned to *Rubigo*, hath been always commended by ſure Experiments, for great and ſwoln Livers, but never for diſſolving a *Schirrhus*. So Ferreous and Acid Waters are good to attenuate the Spleen, and to open all Obſtructions of the lower part of the Belly, ariſing from *Morbous Acid*, as yet fluid; as *Hippoc. Chymic.* ſhews by clear Experiments, Chap. 16. *viz.* by conſuming the Acid humour, by corroborating the Fibra's, and by contracting Them when looſe; that ſo the inbred heat might ariſe more ſtrong in the corroborated member, and may digeſt, that which remains: ſo that they who commend *Iron* in the dry and acid Diſeaſes of the Liver or Milt, and do there either fraudulently or ignorantly call it *Aperitive*, cannot eſcape the brand either of Ignorants or Impoſtors. For *Iron* adminiſtred againſt the aforeſaid Indications, as I have ſhewn, *then* indeed it wants not a *Deletery* Vertue, as *Avicen* teaches well; for it excites the gripings of the Inteſtines, dryneſs and roughneſs of the tongue, ſiccity of the Body, coſtiveneſs of the Belly, and pains of the Head; becauſe it doth conſume not only the manifeſt Ferment of the Stomach, but alſo the occult Acid of the other Bowels, and ſucks up the Vital Seed; but the quantity of it being ſmall, *viz.* the 8200 part of its Body, 'tis no wonder if upon the taking of *Crocus Martis* (though it ſhould be *A-*

For what it is?

peritive, as they ignorantly babble) the Diſeaſe become more vehement, to the deſtruction of the Patient. And in that Caſe they blame the *Apothecary* behind his back, as if he had miſtook the Box, and ſo detract from his honeſty without Cauſe.

But if they will not hearken to an old faithful Admonition, and to my Experience, but pertinaciouſly reſiſt good Counſel, it may chance to come to paſs, that at laſt daily Experience and the Death of their Patients, will in ſpight of their teeth enform them of the Truth.

Otherwiſe the World would be filled with far fetched, ill underſtood, falſe and dubious *Receits*; and the diligent Obſervations of our Anceſtors would be lightly eſteemed: and ſo a new, unskilful, ambiguous, coſtly, ſpeculative, infinite, and groundleſs way of Phyſick, would take place; which under the diſguiſe of falſe Words and deep Learning, would be entertained by *Ideots*; who not knowing the Vertues of Things, hotly contend amongſt themſelves, and rail one at an other, not only about *Aperitive* or *Aſtringent* Iron, but about many other things; ſome of which I have ſpoken of, as much as the nature of the Argument and the good of my Neighbours require: So alſo by uncertain Concluſions and vain Opinions they revile the Wits of the Studious, and to the hurt of their Neighbour, and the infamy of the Art, they approve and ſubſcribe to *Lying Fables*: And not at all ſtudying the Truth, they boaſt themſelves to be great *Doctors*; who yet never will attain to *Science*, becauſe they follow the herd, that went before, and think they have already *attained* it, as *Seneca* rightly ſpeaks; but to return to the matter.

Dioſcorides handles Iron two manner of ways, either preparing *Ferrugo* out of it, or extinguiſhing it in Water or Wine: yet to both the Preparations, he aſcribes an Aſtringent Vertue; he doth not call the one *Aſtringent* and the other *Aperitive*. For when Iron *opens*, it comes from the ſpecifick Acid, degenerating in the body, which Nature could not receive into nouriſhment, and therefore, by reaſon of its Acid taſte, it ruſhes to the Iron; ſo the Bowels being ſtrengthened by degrees, Nature expels *That* together

together with the detained exerements by ſtool. Hence *Helmont* ſays, that Iron doth open by a *ſpecifick* and appropriate Vertue, but it *binds* by a *ſecond* quality: ſo that neither of the Vertues of the Iron, do proceed from the abſence or preſence of its *Mercury* (which they boaſt, but without Truth, that they can extract from it) but from the attraction of the ſpecifick Acid in the *Morbous* Bodies, as *Hippoc. Chymic.* ſhews, Chap. 16. and 28. Thither I refer the *Reader*, that I may not clog him with the repetition of things there ſpoken.

But we may grant, that they can as well extract *Mercury* from *Iron*, as Eximious Vertues from *Copper*: Theſe Vanities are, and always were, nauſeous to *Me*, as well as to the *World* and the *Sick*; for they have no foundation in Nature: ſo that they, and their Maſters, are to be baniſhed from the ſociety of good Men; whileſt on the other ſide, I deal with the Doctrine of Truth and the moſt Ancient Science, which the Ancients found to be agreeable to the Nature of Man, and thought worthy to be aſcribed to *God*, as the School of Truth yet thinks, as *Hippocrates* hath it, *De Veterum Medicina*; for He there teaches, that as there is a manifold *Acid* in the *Macrocoſme*, ſo alſo in Mans Body. And in his Book *de Arte*, *every Acid hath its proper Ventricle*, which yet the vocal and wordy *Colledge* is ignorant of, and therefore he adds, *as they know who ſtudy theſe things*; but ſeeing it is eaſier to ſteal blind *Receits* and to approve them, to ſuppreſs Truth and to load *It* with Calumnies, then to learn the knowledge of the *Ventricles* of Mans Body, 'tis no wonder, that They are ignorant of the Inſtruments of Phyſick, who have no regard to the *Ventricles*; *For if*, ſays the Old Man, *they do not know the Conſtitution from the beginning, and that which is predominant in the body, they cannot preſcribe that which is good for a Sick Man.* Lo here the Cauſe, why *Crocus Martis* being *Aperitive* in the hands of ſuperficial and ignorant *Doctors*, becomes *Aſtrictive*, and *Vice Verſa*; becauſe they are ignorant of their proper Inſtruments: and in the method of Curing, know not how to apply *Active* things to *Paſſive*, becauſe they have not the knowledge of *Ventricles*, or *Sapors*:

neither did they ever learn Them out of *Hippocrates*, of which my *Hippoc. Chymic.* doth diſcover very many.

This is the reaſon, why, as I ſaid before, they come to *Practice*, as the Aſs to his fodder, not knowing to what he extends his Lips, but only as far as his exterior ſenſes, without underſtanding, by ſeeing and taſting, do draw him to his meat. But why do I inſiſt on the decrees of *Philoſophers*, deduced and drawn down from Nature it ſelf, ſince I have to do with ſuch *Perſons*, who never ſo much as dreamt of the *Verity* and *Excellency* of the Art of Phyſick. Therefore they are to be inſtructed by *Examples*, taken out of the Shop of Wiſe Nature.

Obſerve then, That in the Stomach and Milt of a ſound Animal, there dwels a Viral Acid proper to the Milt, but when That Acid doth degenerate into an unuſual taſte, or ſapor, all the neighbouring parts are alſo contaminated; and preſently the pores are contracted, and the Body, which was tranſpirable in health, now ceaſes from action; hence the *Milt* ſwels from the motion of the *Ferment*, which will not obey purging Medicines, as experience ſhews: Now *Iron* taken at mouth, is good for that Ferment and præ-acid Taſte, by which the Milt is leſſened or dried (call it which you will) but not by reaſon of the *Aperitive* force of the Iron, but that Acidity there detained, doth in a ſpecial manner love the Iron, as a thirſty Man doth Beer. Let *Silver* diſſolved in *Aqua Fortis* be an Example.

Aqua Fortis, hath the ſmell and property of *Sulphur* of Iron, becauſe it is made of Sulphurous Nitre, Vitriol or Allum; whence by reaſon of the likeneſs between them, it loves Copper and Iron, as I have above Mechanically ſhewed: Now as in the Stomachs of Animals, the hungry Acid deſires to be ſatisfied with its like, and *Toat* like (*i. e.*) food, it diſſolves and is delighted with it; 'tis juſt ſo in the *Macrocoſme*: For Example, The Acidity of *Aqua Fortis*, is as an empty Stomach, which deſires to be ſatisfied; Silver being given it for food, it diſſolves it, and is pleaſed with it; but when you caſt in a *Phyſical Drug* (as I may ſo call it) into this Solution, I mean *Copper*, with which, for the ſimilitude

militude between them, it is more delighted than with the Silver; presently it deserts the Silver, and again dissolves the Copper, and the whole Solution becomes green.

It must needs be so also in the Body of Man, since *Nature is in every thing alike*, as *Pythagoras*, and since *Him*, *Hippocrates* have taught us.

Again, If you put *Iron* into *Aqua Fortis* (which here is as the *Stomach* or *Ventricle*) impregnated or loaded with Copper, in regard Copper is of harder Solution and Concoction than Iron, the Water presently leaves the Copper and dissolves the Iron.

And although *Aqua Fortis* hath already deposed Silver and Copper, yet its Acidity and Property hath still dominion over them, until they are freed by a melting Fire; which is to be observed by *Our Friends*, for it is else-where of great use.

But it is objected by such, as are ignorant of this Common and Ancient Order and Consent of Nature, and who out of their small Skill, go about to overthrow the Hippocratical Verity, *That I put my Sickle into another Mans Corn and Harvest*; as if it were a shame for me to know, *That* which all men should or ought to know in an Art; or, as if, They were the only famous Philosophers, who compile together Surreptitious and ill understood *Receits*, without the knowledge of the Causes of Things. And as Silver and Copper were troublesome to the *Stomach* of *Aqua Fortis* (that I may so speak) which is better, when it is cured with Iron: so also this Morbous Forrain Ferment, or Humour (call it which you please) being consumed by the Iron, The Ventricle of the Milt and the neighbour parts become better affected. Take therefore at mouth *Stomoma* (*i. e.*) Steel, or its *Crocus*, either Astringent or Aperitive, with which that Acid Ferment hath a greater agreement than with the Milt; and therefore it hastily rushes in, pervading its Pores from the Ventricle of the Milt to the whole Stomach, that it may associate it self with the assumed Iron, which by that Acid Forrain Ferment is dissolved into a Black or Green *Fax*, according to the property of the Acid; as

Horatius his *Sterilis Rubigo*.

as the Excrements of the Belly do testify: and if this Acid be not totally consumed by the Iron, at one turn, it is repeated so often, till the Milt shew some signs of its Exiccation; so the *Anima* of one *ens* (*i. e.*) the Ferment of the Disease, enters into the Iron, and the *Anima* of another goes out, because the *Acid*, or *Anima* of the Iron, which constitutes the Iron, goes forth, (Hence *Crocus Martis* is called by *Horatius*, *Sterilis Rubigo*) that the *Acidity* of the Disease might again enter in, according to the Doctrine of the *Pythagoreans*. For Nature acts in the *Microcosme* by the same Instruments as in the *Macrocosme*: For the Ancients have taught us, *That it is every where alike*.

Here Idiots and Destroyers of Hippocratical Medicine, will object, That I place a Disease in the Ventricle of the Milt, and yet give Iron by the Mouth? How then can the *Morbous Acid* come or reach from the Milt to the Iron? as they have also written concerning burnt Hartshorn: Which Objection is not worth the answering, for one Fool may raise more Questions than an hundred Wise Men can answere; but sithence these sluggish *Doctors* never understood *This* out of *Hippocrates* his Sixth Book *de Morbis Popularibus*; out of pitty to them I will shew them the place; for he there says, *that the whole Body as long as Life is in it, is perspirable and penetrable*; see *Hippoc. Chymic.* Chap. 16.

But when the Milt or Liver is gone to a *Schirrhus*, then indeed the Steel, by consuming the *Faber* or *Operant*, would more harden the Bowels, though the *Aperitive Crocus Martis* of all these *Subscribers* be never so much taken by the Mouth. He that desires to know more of *Iron*, let him read *Hippocrates Chymicus* in the fore-cited Chapter.

So that the Acid, which Iron consumes in the Body of Man, differs very much from the *false Spirit of Venus*, and from all other Acids in general, because it is a specifick; and to be found in no other place: for if Iron be not wholly dissolved by *It* in the Body, the Excrements of the Belly are not tinged into a Black or Green Colour; and then indeed Iron doth *Astringe*, though the

Aperitive

Aperitive Crocus of theſe *Innovators* be adminiſtred, as *Hippocr. Chymic.* in the fore-cited Chap. doth experimentally ſhew: ſo that Acid is alſo a *Specifick*, which burnt Harts-horn drinks up, in ſome Feavors; which the ſluggiſh *Approvers* do judge muſt needs paſs *through the inteſtines to the place affected, and to the ſeat of the Feavor*; if otherwiſe it ought to conſume the Acid there generated and detained: They underſtand not what *Hippocrates* teaches in the fore-cited place, *that the whole Body in Living Perſons is permeable*, and that a Spirit *Acid*, *more Acid*, *or moſt Acid, is the Cauſe of Diſeaſes*, &c. and that it is fermentable, and ſo flows as well through the Pores *adextra* by *diaphoreſis* or gentle ſweat (as appears in the *Criſis*) as it goes and ruſhes to the Inteſtines unto the Harts-horn, as I have ſhewed concerning Steel; provided it find a convenient and ſpecifick Acid in the Body. Truly this is a rural clowniſh Doctrine, and worthy the *Approvers*; for if *Medicines* muſt needs paſs out of the Stomach to the Seat of the Diſeaſe, through the Pores, then the Sweat and Urine would wax Red from the *Crocus Martis*; eſpecially their *Aperitive Crocus*. *Bezoar* in Swoonings, doth not paſs through the Membranes of the Stomach to the Heart, nor doth it return from thence, for conſuming the Lypothymick Acid: Neither doth *Oſtiocolla* travel to the broken Bone, that it may prohibit or abſorb the Specifick Acid there; neither doth the Stone of a Crab go to the Wound; nor doth a grain of Opium taken at Mouth, for the Head-ach, paſs up or aſcend to the Head. They are ignorant, that the Subtile Argute Judge, and equal Weigher of all things (which diſtinctly knows the Seminal Vertue, not only of Medicines, but alſo of all other things beſides; and accordingly doth either embrace, *ſegregate*, or neglect *It*:) dwels in the Stomach, as I ſhall ſhew by Experience, Authority, and Reaſon, in the following Chap. wherefore this indecent kind of ignorance is to be hiſſed out of the School of *Hippocrates* and out of Common Life too, *To inſtruct Block-heads*, as *Lucian* ſays, *is a greater and nobler Secret*, than the very *Philoſophers Stone*; for it were to transform the underſtanding,

as the Excrements of the Belly do teſtify: and if this Acid be not totally conſumed by the Iron, at one turn, it is repeated ſo often, till the Milt ſhew ſome ſigns of its Exiccation; ſo the *Anima* of one *ens* (*i. e.*) the Ferment of the Diſeaſe, enters into the Iron, and the *Anima* of another goes out, becauſe the *Acid*, or *Anima* of the Iron, which conſtitutes the Iron, goes forth, (Hence *Crocus Martis* is called by *Horatius*, *Sterilis Rubigo*) that the *Acidity* of the Diſeaſe might again enter in, according to the Doctrine of the *Pythagoreans*. For Nature acts in the *Microcoſme* by the ſame Inſtruments as in the *Macrocoſme*: For the Ancients have taught us, *That it is every where alike.*

Here Ideots and Deſtroyers of Hippocratical Medicine, will object, That I place a Diſeaſe in the Ventricle of the Milt, and yet give Iron by the Mouth? How then can the *Morbous Acid* come or reach from the Milt to the Iron? as they have alſo written concerning burnt Hartshorn: Which Objection is not worth the anſwering, for one Fool may raiſe more Queſtions than an hundred Wiſe Men can anſwere; but ſithence theſe ſluggiſh *Doctors* never underſtood *This* out of *Hippocrates* his Sixth Book *de Morbis Popularibus*; out of pitty to them I will ſhew them the place; for he there ſays, *that the whole Body as long as Life is in it; is perſpirable and penetrable*; ſee *Hippoc. Chymic.* Chap. 16.

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Aperitive Crocus of these *Innovators* be administred, as *Hippoc. Chymic.* in the fore-cited Chap. doth experimentally shew: so that Acid is also a *Specifick*, which burnt Harts-horn drinks up, in some Feavors; which the sluggish *Approvers* do judge must needs pass *through the intestines to the place affected, and to the seat of the Feavor*; if otherwise it ought to consume the Acid there generated and detained. They understand not what *Hippocrates* teaches in the fore-cited place, *that the whole Body in Living Persons is permeable*, and that a Spirit *Acid*, *more Acid*, *or most Acid, is the Cause of Diseases*, &c. and that it is fermentable, and so flows as well through the Pores *adextra* by *diaphoresis* or gentle sweat (as appears in the *Crisis*) as it goes and rushes to the Intestines unto the Harts-horn, as I have shewed concerning Steel; provided it find a convenient and specifick Acid in the Body. Truly this is a rural clownish Doctrine, and worthy the *Approvers*; for if *Medicines* must needs pass out of the Stomach to the Seat of the Disease, through the Pores, then the Sweat and Urine would wax Red from the *Crocus Martis*; especially their *Aperitive Crocus*. *Bezoar* in Swoonings, doth not pass through the Membranes of the Stomach to the Heart, nor doth it return from thence, for consuming the Lypothymick Acid: Neither doth *Ostiocolla* travel to the broken Bone, that it may prohibit or absorb the Specifick Acid there; neither doth the Stone of a Crab go to the Wound; nor doth a grain of Opium taken at Mouth, for the Head-ach, pass up or ascend to the Head. They are ignorant, that the Subtile Argute Judge, and equal Weigher of all things (which distinctly knows the Seminal Vertue, not only of Medicines, but also of all other things besides; and accordingly doth either embrace, *segregate*, or neglect *It*:) dwels in the Stomach, as I shall shew by Experience, Authority, and Reason, in the following Chap. wherefore this indecent kind of ignorance is to be hissed out of the School of *Hippocrates* and out of Common Life too, *To instruct Block-heads*, as *Lucian* says, *is a greater and nobler Secret*, than the very *Philosophers Stone*; for it were to transform the

understanding,

understanding, and to make Dolts and Stupid Persons, Teachable.

CHAP. IX.

That Acid *and* Alcaly *in Animals is the innate Calid and Radical Humid.*

HAving discovered the Properties and Essences of Things, the Rise, Progress, and Death of Seeds, both Theoretically and Practically, by the two Instruments of Nature, *viz. Acid* and *Alcaly*: Now the Nature of my Argument requires, that I discourse some things concerning the Nature of *Animals*, very necessary for this work, and that I make them plain by clear Examples.

Now, as from the beginning, I have chosen the *Ancients* for my Guids, so for the future, I shall respect them, as my *Deities*; and shall not stir an hairs breadth from the Truth, for fear or favour of any Man: but amongst the *Ancients* I chuse chiefly in all things to follow *Hippocrates*, *He* being to Discourse of *Animals*, chuses Man as the Noblest of all, saying in his *Book of Diet*, *The Soul of Man is increased in Man, but in no other, and likewise the Soul of other great Animals*, &c. The Divine meaning whereof, he gives us in the foresaid *Book of Diet*, in a Learned and Profound Interpretation; where also he proposes the Universal Generation of all Things, and the Nature of Seeds, which my *Hippoc. Chymic.* explains according to his meaning: *All Things*, says he, in the same place, *both Animals and Man himself, consists of two Principles, differing indeed in Faculty, but agreeing in Use*, viz. *Fire and Water*: *Both these together are sufficient both for all other Things and for themselves mutally; but either of them apart is sufficient neither for it self, nor for any other*; and a little after in the same Book, *Omitting other Animals, I shall speak of Man, A Soul creeps into Man, having the mixture or temperament of Fire and Water,*

Fire adorns, Water nourishes.

Water; *Fire adorns all things which are in the Body, and can move all things, but Water nouriſhes all, and through all*; becauſe for a need it abounds with *Alcaly*: as I have ſhewed before by evident Examples; by which a ſolid ſubſtance is concocted by inſpiſſation; againſt the opinion of theſe *gain-ſayers*; but the *Fire*, of which the Old Man ſpeaks in this place, is not *culinary* Fire, as he ſhews in the ſame Book: Man, ſays he, *Threſhes, Waſhes, and Grindes Bread-Corn, and after it is baked in the Fire, he uſes it, but with a ſtrong Fire in its Body; it is not made up, but with a ſoft and gentle one*; ſo that it is a *ſoft* Fire, which adorns and moves all things, which in the 2 Chap. of this Book, and here and there beſides, throughout the whole Book, I have ſhewed by many Examples to be *Acid*; and hereafter ſhall likewiſe further ſhew.

So that *Fire* and *Water*, or *Acid* and *Alcaly* (call them which you will) is that *Balſam*, which is given to Bodies for *Salt*, That they putrefie not; and in very deed it is Salt, as *Hippocrates Chymicus* ſhews from the 12 to the 16 Chapter; and it will more fully appear in the progreſs. This is that innate *Calid*, which old *Hippoc.* ſays, doth abound in things that grow, *Aph.* 14. *S.* 1. *becauſe it is fermentable and expirable*; *and, from aliment taken in like it ſelf, it doth inceſſantly regerminate*; *therefore reaſon perſwades that it very much muſt want Aliment*: by which *Aphoriſme* he intended to ſhew, that unleſs the *innate Calid* (*i. e.*) *Fire* and *Water* in *Animals*, eſpecially growing ones, being very Volatile, were reſtored by its like, the ſtrength of the Body would ſoon decay. Hence that ſaying, *Ubi fames, laborandum non eſt*, &c. Now that which is *its like*, is not that External Body of Fleſh or Bread, which we touch, ſince Man lives not only by Viſible Bread, but by the innate Calid of the Aliments; which as ſoon as ever it is embraced by the Stomach, even before it be heated there, preſently the ſtrength of the Body is repaired.

This innate *Calid* is alſo in *Lettice*, ſo that the *Acid* of the Stomach after it is conſumed by the Aliment, and is paſſed into Radical Humid or Moiſture, immediately the Stomach Contracts it ſelf, and the whole Body Languiſhes

for want of *It*. Hence ariſeth Hunger and Appetite of Food, ſo that an hungry Man, though he be weakned by long Faſting or by Labour, yet upon the taking of Food or Drink, yea of one Cup of Wine only, he finds himſelf immediately refreſhed; and that, before the Food begins to be chylified; becauſe the deficient Acid is reſtored by *That* which was in the Meat, Drink, Bread or Wine, though imperceptibly, as to our outward Senſes. Whence *Hippoc.* ſays, *Aliment is that, which is turned into Spiritual Vapours; by ſuch as theſe the Vital Spirits, which are the Authors of the Active, are nouriſhed.* For as I ſhewed before, That as every Acid Spirit carries the *Anima* inſeparably in its belly, and gets dominion over that body, into which it is infuſed; immediately forming *it* according to its own nature, as I gave examples, *chap. 6.* in Spirit of Salt; which being *poured* into Alcaly of Tartar, preſently forms to it ſelf a Saline Body, agreeable to its own Nature, and becomes *Salt*; and Spirit of Vinegar, or Diſtilled Vinegar, in the ſame Alcaly of Tartar, forms to it ſelf a Body, adæquate to its proper nature, and becomes *Tartar of Wine*: The like may be ſaid of Vitriol, and other Acids: So alſo the Acid of the Stomack of a Man, when it lays hold on Bread, or any nouriſhing thing, over which it may have dominion, it doth turn and tranſmute it into *Chyle*, and afterwards into *humane fleſh*: And the Acid of a Dogs Stomack converts the ſame Bread into Dogs Fleſh, as we are daily taught alſo by other Living Creatures; becauſe Nature works by the ſame Inſtruments in them all: as I have ſhewed in the beginning of this Chapter out of *Hippocrates*, in theſe following words: *The ſoul of Man is increaſed in no other, but in Man*, &c. and from the ſame things of which it conſiſts; and though *Bread* be fermented and Acid, as moſt Aliments are, either more or leſs; yet the Acid in the Stomack of a Man, though of it ſelf weak, hath yet a vitality joyned with it; whence it can obtain dominion over the ſame: As Vinegar gets dominion over and ſuppreſſeth the Acid innate in a Pearl; and *Aqua Fortis* ſubdues the *Acid* in *Silver*, ſo alſo the *Vital Acidity* of

of the Stomach ſubjugates the Acid Ferment of the Bread and other Aliments, and bears ſuch rule over them, as to convert and change them into its own nature: For example, When a man eats a Capon, the Acid of his Stomack overcomes the radical moiſture of the Capon, and being predominant over it, transforms it into its own nature; on the contrary, if a Capon, or a Fiſh, could, or did eat a Man, his Vital Acid in the Stomack, overpowers and kills the radical moiſture left after death in mans fleſh; which then becomes the fleſh of a Capon.

Now that there is a Radical or Vital Moiſture remaining in a Dead Carcaſs, appears by the *Worms*, which will infallibly breed there; and likewiſe by the growing of the nails and hair: And this not only *Paracelſus*, but many other curious Enquirers into Natural Things, have obſerved. And unleſs there were a Radical Moiſture remaining in Fleſh, and in all Aliments, fit and ſufficient nouriſhment could not be ſuppeditated to the *Living*; eſpecially to thoſe, who are growing and encreaſing: witneſs Fleſh and Fiſh ſalted and dried in the ſmoak, which have leſs Radical Moiſture than when they were freſh or new; for much of it is eaten up by the Salt (as *Hippoc. Chymic.* ſhews chap. 14.) and therefore they nouriſh leſs than if they were freſh. Wherefore *Acid* or *Soft Fire*, is to be found as well in the Vegetable and Mineral, as in the Animal Family; and it is *That*, which adorns every thing which is in the World; even as Water is *That*, which nouriſheth it, as *Hippocrates* rightly ſpeaks. I ſay, by the preſence of this *Fire and Water*, both which do conſtitute the Radical Moiſture (as I ſhall ſhew) immediately before Chylification, is the Acid of the Stomack enlightned and refreſhed; in regard it is more or leſs in all Aliments (as alſo in other things) as experience ſhews. There is more radical humidity in one new-laid Egg, than in an whole Pot full of Coleworts; more in one Cup of Wine, than in an whole Bucket of Water. Wherefore Acidity, being deficient in the Stomack (as *Hippoc. Chymic.* in the places fore-cited plainly ſhews) is reſtored by the *Radical Moiſture* of Aliments; but chiefly and moſt of all, by that *Celeſtial Food* dwelling in the Air; for This is the Seed of

Life, without which neither Man, nor other Animals, or any Vegetable can attain to Generation or Life; for that Spiritual Food or Attraction of the External Air, which by often breathing we ſuck in, doth ſo much conduce to the Life of Animals, that it hath cauſed not only Philoſophers, but alſo Plebeians to admire at it: Neither hath *Nature* Artificially placed her Bellows in the neighbourhood of the Heart, onely to cool it, as the Vulgar think, *&c.* but alſo that by their frequent Ventilation they might ſuck in the Æthereal *Aura*, by whoſe *afflatus* and in-breathing, the aforeſaid Acid is repaired, and doth unceſſantly regerminate. For, as the Ingenious *Coſmopolita* ſhews before in the Third Chapter, as the Rain receives That Vertue of Life, and by the Sun Beams joyns it with the Alcaly of the Earth; ſo alſo the ſame Vertue of Life is attracted into the *Microcoſme* by Inſpiration, and is fixed by the Solar Beams of the Heart into the Alcaly, or Radical Moiſture of Animals; as I ſhall by and by Experimentally ſhew:

This is the True Ancient Learning and Doctrine of *Hippocrates*, concerning the *Soft Fire* Adorning Bodies, which will always hold in deſpight of Rabious Maledicence, as *He* teſtifies in his Book *de Carnibus*; as well as *Coſmopolita*; ſaying to the ſame ſenſe, *I will alſo deliver my Opion, That which we call* Calid *ſeems to me to be immortal, and to underſtand all Things; to Adorn, See, Hear, and Perceive all Things, both preſent and future; the greateſt part whereof in the general Perturbation of all Things, retired into the ſupream Appartiment; which the Ancients ſeem to me to have called Æther: The other part, obtaining the loweſt place, is called Earth, Cold and Dry, undergoing many mutations, wherein there is yet much Calidity:* What can be ſpoken more clearly for the Radical Moiſture of Things? For That which *Coſmopolita* ſhews in the *Macrocoſme* (ſee Chap. 3.) the ſame things according to *Hippocrates*, are to be underſtood in the *Microcoſme*; For Mans Body, unleſs it were required by that *Immortal Calid*, both by Aliments, and alſo by Inſpiration, being Cold and Dry, would undergo many changes, and at length would crumble to nothing before our Eyes, even as the flame of a Candle,

Candle, when the Wax or Tallow is ſpent, or when it is blown out by the Wind; yet it doth not wholly periſh, as 'tis Vulgarly thought, and as it ſeems; but being deſtitute of its *Pabulum*, is plucked from it, and ſo is ſcattered abroad and vaniſhes into Air, which is the *Abyſſe* and Univerſal Receptacle of the *Lights* and Spiritual Natures of the Material World; as *Raymund* hath it; and as the Text of *Hippocrates* in his Book *de Carnibus* doth a little before explain. Wherefore the chief Fewel and Food of Life, is ſupplied out of the *Air* to all the three Kingdoms: Hence the Ancients ſaid, *Jovis omnia plena*; and *Coſmopolita* affirms, that the *hidden Food of Life is in the Air*, which as I have ſhewed, aſſumes a Body to it ſelf, in an agreeable and conſentaneous root and ſubject.

Wherefore *Innate Calid* and *Radical Humid* differ much one from another, *That* is wholly Solar and Occultly Acid and Oily, but *This* is more Corporeous, Conſtant, and Saline; *That* is of a Superior Order, *This*, of an Inferior; in which is that Country, where Man takes a Wife to himſelf, as *Coſmopolita* ſpeaks in his Tract *de Sulphur*, and it is the *Hell*, whether *Pluto* is ſaid to have hurried *Proſerpina*; and *Ceres*, her Mother, imploring Jupiters aid for her Redemption, was anſwered, That ſhe might return, if ſhe had taſted nothing in Hell (*i. e.*) unleſs that Celeſtial Spirit, the Child of the Sun, had not been abſorbed by the Alcaly, but as yet had dwelt free in the Air, then *ſhe* might have eaſily returned; but *ſhe* had taſted Grains of a *Pomegranate* in *Eliſium* (*i. e.*) in Pleaſure; for which Reaſon ſhe could not return, till ſix Months were expired (*i. e.*) till the *Pomegranates* were conſumed; and then *Proſerpina* returns to her Mother, as the Light of a Candle doth to its Source or Country, as I ſaid before. So that They are deceived, who confound *Innate Calid* and *Radical Humid* in all the Three Families; for they differ no leſs amongſt themſelves, than *Aqua Cauſtica* doth from *Mercury*, in which it takes a Body, as appears by the *falſified or counterfeit Emplaſter*, unjuſtly aſcribed to *John de Vigo*. For in mixt Bodies, the *Radical Moiſture* is the Seat and Food of the

Celeſtial

Celestial Fire, and its Bond uniting it to the Elementary Body; but that *Igneous Vertue*, is the Form and Soul of mix'd Bodies: more clearly thus, The *Spirit* being either occult or manifestly *Acid*, is the Seat and Band which ties the Soul to the Body. Let us then do as Nature doth, whom Art ought to imitate as her Guid in all Things; or otherwise we shall never become Compleat Servants to Nature.

Let Elementary Water be an Example, which being impregnated with the *Child of the Sun*, that is, with Celestial heat, falls upon the Radical Moisture or Alcaly of a Vine, and is imbibed by it, and so becomes the *same thing* with it, as I have shewed in the Second and Third Chapter.

I shall also give an Example in the *Counterfeit Spirit of Venus*, which from the beginning was Simple Water, which being impregnated with Celestial *Calidity*, fell upon the Radical *Humid* of the Vine; *This* in undergoing many Mutations, by Reason of the aforesaid *Calid*, having a power in it self from Nature to multiply it self, is brought to Maturity, and becomes a *Grape*, whose Aqueous Juice, being pregnant with Celestial *Calid* and Radical *Humid* (These Two beginning Action and Passion one with another) it comes to pass, that from their Mutual Action and Re-action, it conceives Heat (see *Hippoc. Chymic.* Chap. 18.) whence it is said to be *Fermented*, and it becomes *Wine*, in which the heavenly *Calid* overcomes the Radical *Humid*; and if *This* at length gain strength, it becomes *Vinegar*: with this Vinegar and Lees of Wine, now soured, *Copper* is eroded; which so eroded (as *Dioscorides* rightly teaches) becomes *Ærugo*; from which by Distillation, *Vinegar* is again drawn forth; which unskilful Persons by a false Name call *Spirit of Venus*, as I have exactly shewed in its place. This *Vinegar* is nothing else but Water impregnated with *Acid Salt* from the Principle of the Vine, and it is the Seed and Radical *Humid* of its innate *Celestial Fire*: now specificated by the *Vine* (for being pure, it doth not expose it self to be handled by the impure hands of Ignorants, or of the Vulgar) and it is called by a common

name

name *Vinegar*: And as the Heavenly *Calid* had from its first beginning its Seat in the Alcaly of the Water, and afterwards was multiplied in the *Vine*: Hence also it hath retained the Name of its Original, which it keeps also inviolate in *Copper*, to the shame of the *Norimberg* and *Viennn* Doctors and their Colleagues. So that *Vinegar* shall again be an Example to us of the Celestial *Calid*. I say, let *This* be satiated with *Alcaly of Tartar*, till the Ebullition and *Strepitus* cease; in that Ebullition The Spirit binds and unites the Heavenly Fire with the Terrestrial Body (*i. e.*) with *Alcaly*: *Alcaly* in this place represents the Radical *Humid*, in which the Heavenly *Calid* is bound; and after the *Alcaly* (*i. e.*) the Matrix hath received a due Proportion, it casts forth and ejects the rest, to use *Cosmopolita*'s words.

If you would have *Proserpina* return to her Mother, then distil this *Tartar*, and there will come forth an Oil and Water which is bitterish by reason of the Oil, the Oil is that *Pinguous*, by which it was made *Vinegar*: again imbibe this Oil and Water in Alcaly, and distil it, as before, and instead of the Oil there comes forth insipid elementary Water; and so Water in the beginning is impregnated with Coelestical Calid, and afterwards 'tis changed by Fermentation into *Grapes*, then into *Wine*, then into *Vinegar*; at length 'tis made *Salt* in its Mother Alcaly, which is turned into *Oil*, and at last (as I have said of the Light of a Candle, and of *Proserpina*) it returns to its Mother (*i. e.*) to *Aether*, as *Hippocrates* spoke a little before. So that the *root* of the thing, returns into Elementary Water, *viz.* into that which it was, before it was fecundated with the Indoles of a Vine, by the Child of the Sun: So also the *Caput Mortuum* which is left, is nothing else but the *Alcaly of Tartar*, in which the same Spirit inhabites, which I have shewed in Vinegar, but in a way more constant; therefore I shall call it in this place *Radical Humid*, which also by repeated Distillations returns into empty Earth and simple Elementary Water, as *Hippoc. Chymic.* teaches Chap. 10. Thus the saying of *Hermes* and others is fulfilled, *That nothing in the World dies*, &c.

The

The abſurd Collegiates (as appears by one of their Society) do venditate and boaſt this *Simple Elementary Water*, to be a *Cordial* in deſperate Diſeaſes, as I have ſaid above, Chap. 4. but with what advantage to Phyſick, let honeſt Men judge. Wherefore, that Igneous and Oily Vertue is the matter of *Humid* and *Calid* in mixed Bodies, diſpenſed into theſe *Inferiora*, by Superior Natures, without which the Earth would again be vacuous and inane; but the *Aqueous* Humor is the immediate Keeper and Cabinet of that Igneous Spirit incarcerated in the Seed, which abides there ſo long, till by adventitious heat it be promoted to Generation in a fit *Matrix*. And as I have ſhewed in Alcaly with Acid, ſo alſo the Radical *Humid* in every mixt Body, is the Shop and Hearth of *Vulcan*, into which that immortal *Fire* flows, and wherein it is kept; which is the firſt Mover of all the faculties of the *Individuum*: and becauſe it is the Child, and as it were Vicar, of the Sun, I conclude with *Raimund*, and by the authority of *Hippocrates de Carnibus*, that it acts all things in every *leſſer* world, which the Sun doth in the *greater*.

The Seat of Radical Moiſture.

Theſe things being premiſed, let us now ſee where the Seat of this Radical Moiſture in Man is? which without intermiſſion doth catch and abſorb the *Child of the Sun*, or *Proſerpina*. From the ſcituation and effectual Vertue of the *Sun*, we may inferr, that it ſupplies the place of an *Heart* to the Univerſe; for *Life* flows down into all parts from the *Sun*, in regard Light is the Vehicle of Life; yea it is the Fountain and next Cauſe, which inſpires Life into Things, excepting only the Soul of Man, which is a Beam of ſuper-cœleſtial uncreated Light. Now as the *Sun* in the *Macrocoſme* ſupplies the place of an *Heart*, and inſpires *Life* into Things; ſo alſo the *Heart* in the *Microcoſme* muſt ſupply the place of the *Sun*; if theſe Things are True, as they are moſt True and Veracious, which *Hermes* hath left us, *In his Tabula*, viz. That Superior Bodies are as inferior ones, and *Vice Verſa*: Therefore the Vital Spirit, or Cœleſtial Calid attracted by the Lungs, and as it were ſifted through a Sieve, paſſes directly to the *Heart*, where *Proſerpina* is

Uncreated Light.

embraced

embraced and detained by the Radical *Humid*, and there acquires a Body as I above obſerved out of *Hippocrates de Carnibus*: and I have noted the ſame thing alſo concerning *Cauſtick Water* with *Mercury*, and concerning *Vinegar* with *Alcaly of Tartar*: And as Phlegme, or Elementary Water, which is the Root of *Aqua Fortis* and *Vinegar*, is not coagulated with *Mercury*, neither with *Alcaly*, but exhales from heat, and returns into Elementary Water, as I have ſhewed; ſo alſo the Phlegme and Elementary Aqueous Vapor, which we inſpire and ſuck in with the *Celeſtial Calid the Child of the Sun* muſt needs again by Expiration return to Water, as every *Plebeian* knows and is forced to confeſs: But the Saline Nature of *Aqua Fortis* is fixed with *Mercury*, as the Saline Nature of *Vinegar* into *Alcaly* with *Corals*; ſo alſo *Proſerpina*, or the *Child of the Sun*, by Inſpiration attracted by the Lungs to the Radical *Humid*, which hath its Seat in the Heart, is detained there, and is wrought and fixed by the *Radii* and heat of the Heart (after its manner) into *Alcaly*, or *Radical Moiſture*: which thereupon by the ſame Heat and *Pulſe*, or Protruſion is diffuſed through the *whole*, and inſpires Life, Actions, and Faculties into Things and Members (for *Hippocrates* hath ſaid in his fore-cited Book *de Carnibus*; *That It Underſtands, Sees, Adorns, Hears, and Perceives all Things*: See alſo the end of the fore-going Chapter.) And as *It* performs ſeveral Actions, ſo it hath obtained ſeveral Names; for in the Eyes it Sees, in the Tongue it Taſtes, in the Fingers it Touches, *&c.* And as I have ſhewed that *Acid* and *Alcaly* do conſtitute Ferments, ſo alſo Radical *Humid* and innate *Calid*, as well in a Grain of Corn, as in Mans Body, do perform Vital Actions, and therefore may not unfitly be called, The *Vital Ferment*; for it flows and is diffuſed from thence into all the Members of the Body: And as that *Vital Spirit* or *Child of the Sun*, is multiplicative (that I may ſo ſpeak) of it ſelf in the Stomach or Ventricle of a Grain of Corn (which is the 8200 part of its Body, as the deep Sages of Natures Myſteries have obſerved) and from the ſuper-abounding ſtock of its Wealth, may wax ſour, and Vital Ferment.

be made *Ardent and inflameable Water*: So also *This* in Mans Stomach doth regerminate, is multiplied, it sours after the manner of *Ferment*, and like *Aqua Ardens* doth illuminate the whole humane Body with vivid Heat and Colour; and because it hath the Operations of *Fire*, therefore it is called by *Hippocrates*, *a soft Fire*; having its Seat in the Stomach. For as the *Sun*, the heart of the World, doth unceſſantly ſend this Spirit to the *Æther*, which contains all Things which the World hath in it ſelf; leſt the Frame of the World ſhould fail: ſo alſo the *Heart* doth unintermittently ſend this Spirit to the *Æther* of the *Microcoſme* (*i. e.*) to the Stomach, which contains in its Cavity or Venter all Things which the *Microcoſme* hath; and therefore Natures *Myxta* have given it the Name of *Multiventrous Spirit of Mercury*. Now becauſe *It* flows all the days of our Life, and vaniſhes by reaſon of the volatility and frailty proper to the Nature of Animals, eſpecially growing ones, as *Hippoc. Chymic.* demonſtrates, Chap 12. It is therefore neceſſary that *It* ſhould be repaired by Congruous Food (for we are nouriſhed by the ſame Things of which we conſiſt) which doth acquire in the Stomach a beginning of volatileneſs from the fore-ſaid Spirit of the Animal himſelf; a *Species* whereof that *Spirit* was from the beginning (ſo Meat in the Stomach conceives Ferment from within, as *Raymond* in his *Theory*.) Hence of neceſſity, Bread and Water in the Stomach of a *Man*, become *Humane* Aliment; and the ſame Bread and Water in the Stomach of a *Dog*, become *Canine* Aliment, *&c.* becauſe the Vital Acid of Animals, and the Acid Occult in Aliments, are by Digeſtion and Concoction turned into Radical *Humid*: All theſe have fetch'd and deduced their Original from the *Child of the Sun*: But the ſpecifick Acid Vertue in the Aliments is overcome by the Vital Acid dwelling in the Stomach of Animals; as the Acid ſeated in a Pearl, is ſubdued and brought under by Vinegar; but Aliment doth not fall down from a ſound Stomach, till it hath attained the end of *Ferment* (as I have ſhewed by many Examples in the 6 Chap. *For Nature is alike in all Things* (*Hippocrates*, the Authority of the Ancients, and Experience, proving the ſame (*i. e.*) till it hath

Why 'tis called *Ignis Mollis*?

hath attained the Foundation of Vitality and Volatility; for ſince the Radical *Humid* of all Animals is Volatile, as it is alſo the very Shop of *Vulcan*; it is requiſite, that whatſoever is laboured and wrought out there, ſhould be alſo *frail* and *volatile*. Hence the Fleſh of all Animals, Blood, Urine, Sweat, Stones, Sand, Gravel, Schirrhus, Tophus's. *&c.* and whatſoever an Animal can generate, do not reſiſt, but are deſtroyed from their former State and annihilated by *Fire*, or elſe are reduced into an inſipid *Calx*, as Bones, or into a mordicant *Calx*, as the ſhells of Eggs, of Oiſters, and the like, *&c.* But that all Theſe before ſpoken of, were Occultly Salt, before they were burnt, we may be convinced, not only by the Reaſon aforeſaid, and by the Authority of *Hippocrates*, but moreover alſo, by our School Miſtriſs, frequent *Experience*: For which, that I may not cloy you with Repetitions, ſee *Hippoc. Chymic.* from Chap. 12. to the 16. For whatſoever is diſtilled from an Animal, by the help of Fire, there goes forth from it a Liquor, pinguous Oil, and flying Alcaly; but the Acid, which bound up the Alcaly in this tyrannical Operation, returns with *Proſerpina* to her *Mother*, which you may again fetch from thence by Art and ſubtile Hands, as I ſhall ſhew anon: But the *Caput Mortuum*, even from the hardeſt Bones, is left *vacuous and empty*, except Blood; which whilſt it is by degrees reduced to a Coal by a gentile Fire in a Retort; then out of it by Common Water is elicited a portion of *Salt*; but the greateſt part is turned into Fugitive *Alcaly*, not very much ſtinking: a plain argument, that in the *Blood* there is a greater part of Occult *Acid* (binding in the *Alcaly*, that with a Light Fire it may not fly away) than in the *Bones* or other parts, *Hippoc. Chymic.* Chap. 12.

But that it is *Salt* (*viz.* a Compoſition of *Alcaly* and *Acid*) the Solution of Sublimate *Mercury* doth prove; for being caſt into *It* it doth not precipitate *It* as *Alcaly*, as above Chap. 7. But the part, which is diſtilled from the Retort, is fugitive *Alcaly*, and precipitates *Mercury* of a White Colour, and in to a ſmall ſpongy Powder. Add fixed *Alcaly* to *Urine*, a little coagulated

Salt of Blood

Alcaly of Blood.

to the consistence of Hony, that the Alcaly may imbibe the Acid Salt which Man eats, Distill it through a Limbeck, and it will emit a flying Alcaly, having the stinking smell of the Urine from the Ferment of Putrefaction. Urine doth not acquire this putrefactive Ferment in Artificial Putrefactions, as those *Deans* with their wild *Colleagues* do imagine, but in that very moment when the *Serum* passes through the Reins, as through a Syringe; but for want of a Name, I call it *Ferment* of *Putrefaction*, to distinguish it from other *Ferments*; for *Alcaly* of *Sweat* doth not stink, as that of *Urine* doth: neither doth That of Bones nor Horns, but hath a fresh smell, which these vain-glorious *Artists*, hitherto were ignorant of, though my *Hippoc. Chymic.* hath taught them it; yet they never understood it: for *That Book*, as it sets forth the difference of fixed *Alcalyes* and the constancy of Forms by the Precipitation of Sublimate *Mercury* dissolved; so it distinguisheth the Permanency of the Forms of Volatile Alcalyes by the Ferments acquired in their Native Places; because the same Form walks *pari passu* to the Fire with them even unto the very Eliments, *viz.* The Form of the same thing, from which they were taken, as *Geber* and Experience do witness, as I have above clearly shewed. By this we see the reason, why Alcaly and Viperine Radical Humid, or the Alcaly of other Animals, passing through Actual Fire, as I have said, doth retain the Form of the Animal, whence it was taken, undestroyed; but as the *Alcaly* or *Mother*, or *first Matter* of Metals (which I have before demonstrated) is variously agitated by the unskilful multitude in Acids and Causticks, and *Calx's* of Things, not agreeable to its Nature, with which they oppress and destroy its internal Form, and the spark of Acid Metaline *Light*, so that it cannot be encreased or multiplied (as I have shewed in a Grain of Corn) so also I find the first Feminine matter of Alcaly of Vipers to be miserably tossed and debased by unskilful Sciolists, sometimes with *Calx*, sometimes with most *Acid Spirit of Salt* (see *Hippoc. Chymic.* Chap. 3. and 11.) Things contrary to its Nature; so that the spark of *Light* or Internal Form of the Viper, which

Ferment of Putrefaction what?

which ought by a gentle Fermentation to be encreaſed and multiplied, by theſe Violators of Nature is almoſt wholly deſtroyed and annihilated, in like ſort as the *light* of a Pearl remains oppreſſed and ſlain by *Their Celebrated Spirit of Venus.* And as a skilful Artiſt, taking Nature for his Guide, can multiply the form in *Mother* of Metals, ſo alſo the ſame Artiſt, by the ſame Guide, can multiply the Form in the *Mother* or *Alcaly of Vipers.* I have ſhewed, how wiſe Nature, by her working, doth perfect *Radical Humid* for the Family of Vegetables, on which Antiquity hath ſuperſtructed *Artificial Humid* with good ſucceſs. I have alſo ſhewed out of *Hippocrates de Carnibus*, the method and way that Nature uſeth in the preparation of *Radical Humid* in the *Animal* Family; in imitation of which, I have made the *Artificial*, not departing an hairs breadth from the Natural Operation.

Hence it will appear to all in general, and every individual Man in particular, both preſent and to come, againſt the opinion of Calumniators, That This *Invention of mine*, may be truly and without fraud called *Radical humid by Art*, as well as *Salt of Vipers*; for it conſiſts of the Alcaly of Vipers (which, as I have above evinced by Experience and the Authority of *Geber*; to act the Woman, as in Minerals and Vegetables, ſo alſo in this Animal *Claſſis* it is wholly of a feminine nature, and hath in it an Occult Viperine form) and of *the Child of the Sun*; or cœleſtial *Calid*, not as yet corrupted; which ſince it cannot be alone, is received into and detained in the Alcaly of Water, until it be fermented into Salt (*i. e.*) into the degree of the perfection of its Nature: Thus you have my mind. For an Example of this Salt, my *Hippoc. Chymic.* chap. 10. holds forth the way, whereby with Alcaly of Tartar, Vitriolate Tartar may be made out of a Crude *Minera* of *Vitriol of Mars*; and it ſhews alſo, *That Nature is in all things alike*, and truly it diſcovers a great thing. But theſe barren and unfruitful pretenders to Phyſick, by reaſon of the cœcity of their minds, are not capable of the evident truth; yea They ſcarce know the things which are before their eyes; for in Acid Fountains they ſee not *the Child of the Sun* diluted by

The *Viprine Salt* of the Author is Radical Humid by Art.

provi-

provident Nature in Water, which never fails; and by flowing by an immature Vein of Iron, it licks and affects it with a ſweet Acidity, and after it hath flowed down a little it waxes yellow, as *Hippocrates Chymicus* ſhews, chap. 16. An evident argument that the Celeſtial Spirit flaggs in its action, when ſeed fails, no otherwiſe then as *Proſerpina*, having enjoyed her pleaſure, returns to her Mother; yet notwithſtanding it ſuffers not it ſelf to be taken by polluted hands, but to intelligent perſons, it manifeſts it ſelf even whileſt dormant and aſleep: Wherefore there are many wayes conducing to this end which are very craggy and obſcure to Detractors: But what ingenious Man would not try the ſame with crude Natural Vitriol of *Mars*? Unleſs perhaps he be afraid of the frequent ſolution, long digeſtion, and judicious coagulation.

Behold here, all ye Candid Aſſertors of Phyſical *Light*, how the firſt Fæminine matter of *Alcaly* of *Vipers*, by a Triumphant and Solemn Marriage with the Child of the Sun, is exalted into the Nature of *Salt*; whoſe Marriage is celebrated in the Houſe of Nature, to uſe *Coſmopolita's* words; againſt which, for theſe twenty years (whileſt I have made my abode in this Country) Dogs have barked, Ravens have croked, and unheard of clamors have been made; which I deſpiſing, do yet live to triumph over and contemne my Adverſaries; but if I had died, ſome would have accounted thoſe things as Prodigies and Omens of my Death. Oh how much paper have theſe *Grammatical Maſters* ſpent about this matter? what ſlanders, what infamatory Libels, how many Calumnies and filthy Reproaches, have theſe uncivil Declaimers againſt the Works of Nature, vomited forth into their own laps? As for *my Self*, I have choſen Truth for my faithful *Defendreſs*, which though it may be oppreſſed and exerciſed with great weight and burden amongſt Men, yet it is impoſſible that it ſhould be wholy extinguiſhed, in regard it is powerful, inexpugnable, and triumphant above all things in the World, as my Preface to *Hippoc. Chymicus* proves out of the *Holy Scripturs*. Therefore I entertain with deligſt, the

the contempts of *Phebeians*, for I can ſcarce find filth or dirt enough to ſtop the Mouths of ſuch evil Speakers. I know, that 'tis the part of a fool to contend with unskilful perſons about things which they underſtand not, or to think to get any credit, by teaching them; but on the contrary, a Wiſe Man will ſilently conſider the times, places, and cuſtoms of the *Ruling* Men with whom he is converſant; and beſides, he will confide in juſt actions, and then cheerfully expect an *equal* event; for hereby accrews great glory and emolument: Let *Helwigdidrick* be a late Example (I ſpeak not reproachingly, for we ſhould ſay nothing but good of the dead or of the abſent) what ſtone did not he turn heretofore, together with his Aſſociates, againſt the Experimental Truth? which was a ſtranger and unknown to Them all? what did they not infuſe into the Vulgar aganſt my converſation? (as if that were at all to the purpoſe) but I derided all the actions of theſe dancing Camels (to ſpeak proverbially) as knowing, that 'tis the common refuge of vain and wild heads, when they want reaſons to oppugne the Truth, to catch at any opportunity to blemiſh ones *manners*, as my Anſwer publiſhed in the year *1656* under the Title of *Eccho* may witneſs. Theſe furious Deans, with their foul-mouthed Colleagues, and their antecedent herd, do commit the ſame evil at this day; but the beſt is, they are All *Judges* contaminated with filthy ignorance, and are unjuſt witneſſes, yea falſaries in the Law; as I have hitherto clearly proved. All whoſe Writings, as well paſt as preſent, though by fooliſh diligence compacted into a great Volume, yet they are not ſufficient to bear down *Tachenius*, who is ſupported by the Truth. But theſe Idlers do but waſte their golden and irreparable *time* in theſe employments, in thus exerciſing their lying Genius's, and in fruitleſs blotting of Paper; Their labour both formerly and hereafter ſhall be in vain, for if a generous *Horſe* regards not the Barkings of following Curs, I ſhall as little eſteem my preſent or future Oppoſers, either ſingle or altogether; you know my meaning, for I live and confide in juſt actions; but enough of This: To return, In

Eccho to vindicate *Chyroſophus*.

Vitriol

Vitriol there is an Acid moſt grateful to, pleaſant, and deſired by humane nature, as *Paracelſus* and Experience ſay: This Acid, becauſe it cannot be alone, aſſociates it ſelf with the immature Metal, and with *It* grows into a Saline Body; free or ſeparate *It*, and it will be worth your labour; for there lurks in *It* an *Arcanum* for the Epilepſy, of which the ingenious *Crollius* ſpeaks: *Paracelſus* attributes *many Vertues to the volatileneſs of Spirit of Vitriol, in curing the Ep lepſy*; but I could never ſee any of *Them*: neither *did ever any man affirm to me, that he could cure a confirmed Ep lepſy, only by Vulgar and ſimply prepared Spirit of Vitriol.* Thus far He. Therefore, for the reaſons hinted before, it cannot be elicited by Diſtillation, as all Candid Operators witneſs; for this cauſe, the Searchers into the Secrets of Nature have tried another way, which I ſhould willingly have declared in this place, but that I have experience, That 'tis a fooliſh thing to expoſe ones ſelf to Ignorants and to the Vulgar, for what they praiſe is blame-worthy, what they think is vain, what they ſpeak is falſe, what they diſapprove is good, what they allow evil, and what they extol infamous; as I have hitherto proved by clear Examples. Neither doth an *Arcanum* lie hid in the ſaid *Volatility* only for the *Epilepſie*, but alſo for the *Suffocation of the Matrix*, for the Palpitation of the Heart, and for the Corroboration of the Spirits, Brain, Heart, and of the whole *Individuum*; ſince it is the Child of the Sun, and the Twin-brother of our Vital Spirit. But of This I have ſaid enough. I return now to the Vacuous Alcaly of Vipers, which is ill treated by the company of *Vulgar pretended Chymiſts.*

Baſilius Valent. his White Spirit of *Vitriol* what?

As we do not give a *Scorpion*, or a Piece of Wood, to thoſe that are hungry, and ask for *Bread*; neither do we give Oil mixed with Gaul to ſuch as are *thirſty*; but we exhibite to them ſimilary and conſentaneous Aliments, of the ſame family of which the hungry perſon conſiſts, as *Hippocrates* teaches: So alſo the Alcaly of Vipers, being vacuous, hungry, and thirſty, muſt be ſatisfied with *That* of which it conſiſts, not with *Calx* or Spirit of *Salt*, as unskilful Writers give out; for I have

ſhewed

ſhewed in the 3. Chapter of this *Tract*, That Nature doth ſo, and *ſhe is every where alike*. And if the *Alumnus* and Scholar of Truth in his Operations ſhall imitate *Her*, he can never go out of the way, as by and by will appear by a clearer Example: But here I would have all *Readers* to take Notice, that as all Remedies, proceeding from *Animals* are weaker for Mans uſe, than Thoſe that come from *Minerals*; ſo we are here to underſtand, that *Alcaly* of *Vipers* poſſeſſes a ſpecifick Form, and is impregnated with Natural *Acid* ſupervening, and under a convenient heat of Digeſtion, it is ripened into one excellent Body: The ſame *Alcaly* indeed may ariſe more efficacious, by reaſon of its Maſculine adjunct, yet it cannot aſcend beyond the boundary before alledged out of *Raymund*; ſo that the Remedies taken from the *Mineral* Family, are found to be much more perfect in the *Epilepſie*, Aſthma, Stone, and moſt Coagulated Diſeaſes (*Hippoc. Chymic.* Chap. 14.) in as much as their Radical *Humid* is found by Experience to be more conſtant.

Coagulated Diſeaſes.

Now Thoſe in general are called *Coagulated Diſeaſes*, who from Immature *Acid*, flow from the Stomach to the other Shops of Digeſtion, and are Coagulated there, or if in theſe very Shops, through the degenerating of the Occaſional Cauſe, the *Acid* become more powerful, then it ſuppreſſes the *Innate*, and preſently the Pores are contracted, and it undergoes Coagulation with the *Alcaly* of the place, according to the property of the Member; as I have above ſhewed out of *Hippocrates*. And as in the *Macrocoſme* there dwels an Occult Food of Life in the *Air*, which becauſe it contains all things which the World hath, is therefore called a *Multiventrous Spirit*; we muſt alſo underſtand the ſame in the *Microcoſme*: So that in the *Air* of Mans Stomach, there inhabits a *Multiventrous Spirit*, which contains in it whatſoever a Man can do, or hath; as I have ſhewed out of *Hippocrates* in his Book *de Carnibus*. If therefore any of This Spirit, dwelling in the Stomach, ſhall ſuck in a more *Acid* Air of a ſtrange and forraign taſte or ſmell not agreeing to its own Nature, which it cannot through-

ly change into *Manure* or *Salt*, and it falls into another Shop of Digeſtion, where Concoction, and Alteration proceed more ſweetly than in the Stomach, then preſently the more powerful ſuppreſſes the weaker, and they are both Coagulated into a forrain *Indoles*; whence the indwelling Spirit rages, and as it were diſdains, the Member waxes hot, and doth not Concoct its proper Aliment, from whence a *Diſeaſe* is manifeſtly produced; after the ſame manner, as when *Vinegar* ſuppreſſes the indwelling *Rector* of a Pearl, and doth ſo weaken *It*, that it loſes the form and ſhape of *Pearl*; as I have elſewhere clearly ſhewn.

Wherefore the vivid and manifeſt *Acid*, if by miſtake it fall from the Stomach, and paſs to the *Oeconomy* of the Bowels, immediately, as forrain and more powerful, it ſubdues the feeble *Operator* of the place, and takes the *Province* to it ſelf; cauſing either Collick pains, or making the Belly either looſe or coſtive, or working ſuch like diſorders in the Inteſtines; which I think better, to avoid Prolixity, to omit in this place, for they require a diſtinct Tract by themſelves. I have only endeavoured to deduce neceſſary Arguments in this matter, from thence to diſcover the folly of Thoſe, who have learned to do nothing elſe but to defame and revile the Truth, which is unknown to them. Now this vivid and manifeſt *Acid* (of which I now ſpeak) muſt not be underſtood to be a certain *Fluid Liquor*, which as the vulgar ſpeaks, deſcends as a ſwift Torrent, but it is alſo a vital thing, called by *Hippocrates*, *Aura Lævis*; by *Virgil*, *Igneus Vigor*; by *Horatius*, *Divina Aura*; of it ſelf wanting a Body, but *not enduring to be alone* (as *Hippocrates* ſays, *de Diæta*) it incorporates it ſelf with Meats and Drinks, and informs Them into the Vital Aliment of the Body, which takes in that Food. Hence again, *Hippocrates* in his firſt Book *de Diæta*, *The Soul of Man is encreaſed in Man, and in no other, and the like of other great Animals.* Now this *Aura* by Irradiation alone perfects its work, but a forrain *Aura* mixed with it, as Water with Water, Fire with Fire, is alone ſufficient to be the cauſe of Diſeaſes, as our Maſter teaches *de veterum Medicina*, becauſe it can eaſily alter the inbred

Vital *Aura*.

Aura the Cauſe of Diſeaſes.

bred Operator (for every Male hath its Ventricle) which being altred, presently the Digestion of the place is disturbed, and the very Aliment, otherwise Vivid, is perverted into a *Mucous Indoles*, according to the property of the diseased and affected Member; just as the Occult Sulphurous Odor of *Orpiment* doth die and denigrate *Sal Saturni*, though far distant from it, after this manner, Write with *Saccharum Saturni* dissolved in Water, that Writing will not be seen upon the Paper; place that written paper in the Frontispiece of any Book, then have ready an Humid Sulphurous Odor, which is made of *unslaked Lime* and *Orpiment*, both first severally pounded, and afterwards mixed together; pour Water on this Powder, and make a *Lixivium*, with which you moisten *another Paper*, and place it at the end of the same Book; shut the Book, and the next morning you shall find the Writing to appear obscurely black, because the Sulphureous Odor of the *Orpiment*, being excited by the *Alcaly* of the *Lime*, hath pierced through the whole body of the Book unto its own subject. *In like sort* (says *Hippocrates*, *de Diæta*; *The nature of Man doth operate, with which all Arts and all Artifices do communicate.* For if the Operator and Causes of that glewish matter called *Synovia* in the joynt of the Foot (for Example) were so disposed to receive the vitiated *Aura* of the Stomach, as *Sal Saturni* is to entertain the *Aura* inquinated by the Odor of the Sulphur of *Orpiment*, then indeed the *Aura* of the Stomach, being tinged with a forrain Odor, would also inquinate the *Synovia* in the joynt of the Toe; and this is done only by *Odor*, that I may so speak, from whence ariseth pain in the joynt of the Foot, which from the place is called *Podagra*, or the *Foot-gout*; and immediately the Aliment, otherwise vivid, is perverted into a *Mucous Indoles*, &c. as I said but now.

A way of Cryptography.

Art imitates Nature and this Art.

This kind, after the manner of the Ancients, *Hippocrates* in general called *Divine*, and hath enjoyned every one to take notice of and observe, That if there be any *Divine* Thing in Diseases, we should have special regard to *that*, if ever we would be good and admirable Physicians.

The *Divinum* of *Hippocrates*.

Now that *Divinum* of *Hippocrates* is the Occult, Arduous, Obscure, Hidden, Cryptical and Admirable Ferment in all the Ventricles, both of the great and lesser World; which cannot be seen with the eyes, neither can it be perceived by any outward sense, but only 'tis known by its effect, and that not without much labour, and no little expence of time; but I have shewed it to be the *Child* of the Sun, Chap. 2. For whatsoever doth escape the sight of the bodily eye, the eye of the Understanding doth, and can reach it; as in *His book of Precepts*.

The *Vienna* Professors gross and Contumelious Opinion of the foundation of Ancient Physick.

This arduous and obscure *Ferment* hath so crazed the Brains of the Deans, and their Collegiats, though they think they were solid, strong, and well grounded in Art, That they do altogether dislike that *Divinum*, as a certain piacular thing, (which my *Hippoc. Chymic.* celebrates both in Diseases and Remedies) and they are also ignorant how to distinguish new things from old, latter from former; which the fourth in order of the *Vienna* Professors, a scurrilous and dicacious prater, doth confess, *viz.* that he is amazed to find that it should be treated of by learned men, as being *manifestly false and foolish*; but he Dreams waking, as the Proverb is.

But our *Galen* (even when he was old, deriding such mens madness) together with many other famous Men, had *It* in great esteem, and (with *Hippocrates*) confesses in his 2. Book of the Differences of Feavors, Chap. 27. That It is placed in a certain secret affection, and that it doth inhere in the very parts, saying of intermittent Feavors, *It ceases not to bring about the Circuitus of their Fits, as long as the Disposition, in the generating part, is preserved*: whence it appears, that in that place he fetches the Cures of Feavors a little higher than he doth in his *Books of Method* and in his *First Book of Art* to *Glaucoe*; affirming, *That the correction of this Disposition, is the* principle scope of the Cure; and in the same book, *Where heat overcomes the matter, it is called increment*. He means nothing else, but what my *Hippoc. Chym.* hath more clearly explained (for the sake of the studious, *viz.* Ferment, either occult, or manifest; which speaking to Plebeians, he calls *heat*, and Alcaly *matter*

ter; for if *heat* do overcome, it muſt needs have dominion over the *Matter or Alcaly*, as I have abundantly proved by all examples both in the great and leſſer world; and then (ſayes *Galen*) *Heat* is encreaſed not only in Feavers, but alſo in all other Diſeaſes and Matters, as I have before ſhewed in Barly, a ſeed of the *Macrocoſme*; and now ſhall likewiſe ſhew even *ad oculum* in *Paronychia* (*i. e.*) (an impoſthumation under the root of the Nails) a ſeed of the Microcoſm. Now *Paronychia*, the Miſtreſs or Queen of almoſt all Diſeaſes, is an Igneous Tumour; ſo called from the moſt Acute pain accompanying it; the like whereof is hardly to be found amongſt Men; it ariſes in the root of the Nails (*i. e.*) in their Ventricle, when the Occult Ferment is by miſtake *There* made manifeſt and ſoured; in that very moment the vivid Aliment is perverted, the neighbouring parts are diſturbed, and ſometimes the Bones themſelves are eroded.

But this *Diſpoſition* is corrected by a more powerful *Acid* deſcending from a perfecter Family, which can ſubdue the inflamed Ferment of the *Microcoſme*: For before the *Tumour* be opened, it muſt be anointed over, and the whole Nail too, with *Acid* of Sulphur, as it is gathered *Ex Campana*, which by reaſon of its thickneſs they call *Oil*, when this Unction cauſeth pricking and itching a little in the part affected, in that very moment you may obſerve the corruptive *Diſpoſition* to be corrected, becauſe the more powerfull *Anima* gets dominion over the weaker, no otherwiſe than as counterfeit Spirit of *Venus* ſubjugates the Occult *Acid* in a Pearl. Do but waſh your Finger with this warm Water, and it is enough. I would have diſcovered many more of theſe things, for the benefit of my Neighbours, as alſo a pleaſant, ſafe and delightſome Remedy for the *Lues Venerea* it ſelf, unleſs I had been every where prevented by the *deep Wiſdom* of the *Vienna* Profeſſors.

I know Learned Men, not a few, have by long uſe and experience taken notice of things, that do eradicate certain *Diſpoſitions*; but by reaſon of the multitude of *Ignorants* in this woful age, which, with one mouth would raile againſt them (I am almoſt aſhamed to ſpeak it) they

are

are afraid to publish Them, because they exceed the understanding of *Gregarious* and *Talkative Medicks*.

So the Vulgar Country People by proper Antidotes (*i. e.*) such as specifically destroy some *Dispositions*, or do restrain, absorb, or overcome the *Acid* and Ferment of the place) do sometimes Cure not only Feavors, but many other Diseases, without Purgation premised; whereby Old Women do sometimes disgrace, even the most able Physicians, and do counterfeit their Art; so *Hippocrates* teaches in his Book *de Affectionibus*, *If Patients seem to have no need of* Pharmaca, *give them Medicaments in Drink, by which the Feavor may be either changed or may abate.*

My *Hippocrates Chymicus*, with *Galen* and *Hippocrates*, give many Examples of this *Correction* (as the former calls it) of *Transmutation* (as the latter) of *Dispositions*; which being Cryptical, Abstruse, and Magnetical Works of Nature, and besides are the Foundations of the Physick of our Predecessors, The *Deans* and their Colleagues have indeed read them, as appears, but being above their reach, and above *Priscians* Grammar Rules, they could not understand Them, as appears by their reproachful canting; for therefore they asperse them, as not having *learned to consider obscure things from manifest*, as *Hippocrates* pleasantly derides them, *L. 1. de Diæta.* But if this Spiritual Operation be to be derided, then surely, *whole Nature*, and the profound *Science* of True Physick will be also counted ridiculous. For whatsoever Nature works in the greater or lesser world, she always begins and ends it in a Spiritual manner; for the Creator hath given her no other *Instruments* to work withal: Out of a small Seed of Hemp or Flax, there ariseth a Plant, which having first undergone many vexatious Alterations, at length is made a *Sail*, by the help whereof, and by the blowing of the *Winds*, Men are carried up and down the World. This Action, from the beginning to the end, proceeds Spiritually, like Cryptography, as *Hippocrates Chymicus* shews in the fore-cited place. And also Mans Nature it self, of Bread only and simple Water, doth not only frame for it self the *Body*, which we touch, but also the

Wonderful are thy works O Lord &c. *Psa.* 91.

the Optick *Spirit* of incomprehensible Tenuity. None but the *Norimberg* and *Austrian Collegiates* and their fellows, would ever have called this Operation of Nature *inept*, Circum-foraneous, and Mountebank-like. So in the very Science of Physick, neither *Rhubarb*, *Senna*, nor *Agarick*, &c. (their innate Spirit being taken away) can any longer disturb Mans Body; neither, in their full strength, if they could be given to a Carkass of a Man (the Spirit being gone) would they purge it. So that whatsoever is in *Medicine*, besides the Clamours of the *Deans* and their Colleagues, like Cryptography, it proceeds Spiritually; *for we must needs confess, that all things do consist of insensible Principles*, as *Lucretius* says, *Lib.* 2. Moreover one weight or parcel of Galls, and a fourth part of that weight of *Vitriol* (though neither of them black) yet being joyned together with an Aqueos Liquor, by reason of the innate Spirit, do wax black, because the *Alcaly* of the *Galls* doth suck up the *Acid Spirit* of the *Vitriol*, and the immature Iron is diluted into Ink, which is in use amongst Kings, Learned and Unlearned, yea *Plebeians* themselves: Yet all these, when they handle this Cryptick and hidden Colour, brought thus to light, are accused by these lofty *Deans* and their Owl-light Companions, as Circumforaneous and Juglers.

Bread and Water are made Spirits.

Ink produced of Occult things.

Truly they use their Tongues ill, but their Ink worse. But to make an end, I conclude with *Lucretius*, That both Learned and Unlearned must needs confess, *That whatsoever the World hath, is produced of Cryptical and hidden things*; Only these talkative *Praters*, to evidence to the whole World that they are vain and empty Bodies, without Spirit, do laugh at these *Works* of Nature, together with their *Instruments*. They are a company of light, ungrateful, and ludicrous Birds, which I leave to be fed upon by such hungry Stomachs as desire them; and so I return whence I digressed. The *Aura* of the Stomach, being endued with a forrain odor, can creep to the joynts of the Foot (as the *Aura* of Common Sulphur can reach *Sal Saturni*, though far distant from it, as I have experimentally shewed) and there it can so trouble the inhabiting Spirit, that the Aliment

Aliment of the place waxes sour, and pain arises, which from the place is called *Podagrick*. But of what *Species* this *Acidity* is, so tinged by the strange or forrain *Aura*, Mans understanding cannot comprehend: Whence *Hippocrates* in *Fraceptionum libello*, *By reason of diverse attributes, sometimes Diseases stay a longer while.* So that for the particulur Cure, That which is contary to these pains lies hid in the specifick Alcaly, which thirsts after such an Acid; as I have shewed concerning *Iron* for the Spleen, and concerning *Ostio Calla*, &c. (see *Hippocrates Chymic.* Chap 28.) But for an external Remedy I have sometimes seen the most vehement pain to have been mitigated by warm Water of Frogs Spawn, which is rich of Volatile Alcaly, as *Hippoc. Chymic.* hath it, Chap. 19. *Tenzelius* also, in his *Exegesis* hath the same, only adding *Allum*. This *Aura*, if it creeps to the Reins, and there suppresses the presiding Spirit, whatsoever it lays hold on, it coagulates with the Alcaly of Urine, into the shape of a *Stone*: the same also happens in the Bladder, in the Liver, in the *Vena Porta*, in the Lungs, in the Vesicle of the Gaul, and in all the Shops of Digestion, in which there is found a fluid Nature. For the way, see *Hippoc. Chimic.* Chap. 14. Stones are preternaturally generated after the same manner, not only in Men, but also in certain Animals, and their parts; and the same Acid which had coagulated them (the order being changed) doth again dissolve them, as *Dame* Nature shews in Stones of Crabs; which yet are not Morbous to the Crabs, but arise from their very first Constitutions. I also keep by me *Stones* taken out of the Kidneys of Capons, and out of the Gauls of Oxen. There are some, which can shew *some* taken from Their Bladders and Reins.

Water of Frogs Spawn, rich in *Alcaly*, takes away Gowty inflamations.

The Original of the Stone.

So also there is preternaturally bred a stone found in the Gaul of an Histrix or Hedghog, which such Fablers, who are ignorant of the nature and causes of things, do mightily commend; especially Those, who would be accounted by Old Wives and the ignorant Vulgar *Canonical Physicians*: Whereas the *Learned* know, That Hypocratical Medicine is but *One*, which needs be distinguished but into *Internal* and *External*; whereas these Men, out of

The Stone of an Histrix.

their

their ignorance have parted it into diverse *Sects*, as my *Hippoc. Chymic.* hath it in the Preface. I return to the stone growing in the Hedghogs Gaul, to which they ascribe many imaginary Vertues; and out of meer simplicity (which is not to be endured in Physick) do affirm, that it is of singular Vertue above the stones of all other Animals; grounding their opinion, on this weak argument, because it is bitter to the taste, not considering that it contracted the bitter tast from the *Gaul*, part of which hath undergone coagulation with *Acid* and *Alcaly*; after the same manner, as the stone of the Kidneys, is many times red from the Blood, and That of the Bladder is white, by reason of the Mucilage mixed with it, which the Bladder doth exude. For whatsoever the coagulating *Acid* and *Alcaly*, do lay hold of in hasty coagulation, being thrust forth from the Vital Regiment, and doth not much recede from the nature of them both, they take *it* into their society; just as Lime moistened with Water, again becomes a *stony or petrous coagulum* with things mixed with it, as daily experience shews. Hence it is, That *Hippocrates de Diæta* laments, *That Men are ignorant how to know, or collect obscure things from manifest.* But why, I pray, is not the stone found in the Gaul of an Oxe, of the same Vertue with That in an Histrix or Hedghog? since in other cases, nothing comes from an Oxe, which is not good for Mans use? The reason is plain, because it is more common. The *Deans* and their *Colleagues* do commend the Hedghogs stone, by this just, as wise, as powerful, reason; *If it were not of great vertue, Noble Men would not buy it at so great a rate.* Fie upon it! do your mighty Masterships so expose your selves to the laughter of the Vulgar? What, are *Great* and *Noble* Men the proper *Arbitrators* and Judges of Physick in our days? And if they were, yet it is no new thing to approve Distilled Vinegar for the *Son* of *Venus*, and Elementary Water for *Cordial*, and out of meer Ignorance to commend and dedicate It to them for a great Treasure in Physick, and to swear that they are good for our Neighbours Health; whereas they do but appear so, but are really for his destruction. But the multitude of *Followers* procures no patronage to lies,

Stone in the Gall of an Oxe.

though unhappy Mortals are apt to obey and follow *growne* sloth and ignorance.

But how came Great Persons to know that the Vertues of this Stone were so excellent, seeing they cannot be learned, but by the knowledge of their Causes, and by manifold Experiences; witness *Hippocrates de Lege*. But Noble Men, or very few of them, study *either*, and therefore they must needs by a kind of adoption suck in this their knowledge from such vain *Fablers*, to whom they *subscribe*, and who make great but empty vaunts of their Skill in Physick; for they know not how to distinguish *Vinegar* from *Salt*, as I have proved, as clear as the Sun.

Away therefore with these trifles, which redound so much to the detriment of the Noble *Art* of Physick, and the misery and damage of ones Neighbour. Such *Mediasters* are so full of vanities (witness the *reformed and vulgarly applauded Augsburgh Dispensatory*) that the Name of a Physician is now become the reproach of the People, and the jeer of *Comœdians*; and unless this sordid unskilfulness and miserable ignorance be laid aside, I am afraid the day is at hand, that Physicians must turn Country Plow-men. To which doughty principle and design the supplanting of the Ancient Physick of *Hippocrates*, and the defaming of the memorable Doctrine of our Predecessors (God so permitting) will not a little contribute. But to return, at length they pour Water on the Stone, leaving it there so long till it grow bitter; which is done in a short space of time, especially if the Stone be new and fresh; for if it hath been washed oftentimes before, then it must be steeped a longer time in the Water. This Ablution they afterwards prescribe to the Sick, whose taste is bitter and its vertue heating.

Zacutus Idem.

Here *Zacutus* jestingly and smilingly says, *In intense Feavers it is not good to be given, for it mightily heats, inflames, and provokes thirst, although it be mixed with cold Cordials, and at last it provokes Sweat (after great trouble, straits, and with much ado) and removes obstructions by reason of its bitterness.* The meaning is, that *Lapis angui-*

in herba, for highly to heat, to inflame, and to provoke thirst, are accidents proper in Malignant (so called) Feavors, which properties if they proceed from the Ablution of the Stone, being drunk, as *Zacutus* testifies, then certainly it is far from taking them away, as our Mr. *Deans* and their Collegiates do promise.

But let us hear *Dioscorides*, who ascribes the same Vertues to the Gaul of Animals, which our great Doctors do to the Ablution of their Stone. *The Gaul*, says he, *is bitter, sharp and heating*; and therefore the Ablution of the Stone is bitter from the Gaul, because it hath the same Vertues with the Gaul, if we believe *Dioscorides*. But we will prescribe this Ablution to great Men, in Maligne and Perillous Diseases, say our Mr. *Deans* and their Fellows. Why I pray? *because it costs dear*, *ergo*, &c. Oh sottish Society! The shame and detriment of Great Men, That it is bitter from the Gaul, the hasty ablution shews, as I said before; and therefore if this Stone be *Aperitive* simply for its bitterness, it must of necessity be granted, That one drop taken from the Gaul of the meanest Fish, is of more avail for opening of Obstructions, than ten Ablutions of this Stone, because the Gauls of all are sharp and heating, witness *Dioscorides*: see also *Hippoc. Chymic.* Chap. 14.

But 'tis a mad thing to imagine, that this Stone is bred thus in the Gaul, and that it contracted not its bitter taste there-from. Sope is boiled and made out of *Alcaly* and *Oil*, and becomes a Body of a *Salt* taste and white, because no forrain thing enters into it: To which, if you add, in boiling, Juice of Beet, it acquires a Green Colour; and if *Gaul* were likewise added to that Juice, the Sope must needs be bitter.

So the Stones of the Kidneys are of a *Red* Colour, by reason of the Blood which transudes or soaks thither by little and little out of the Veins, by reason of the *Morbous Acid*, and entering into the *Coagulum* tinges and dies the Stones. The Stone of the Bladder is *White*, by reason of the Slime found in the Bladder; and shall not the Stone bred in the Gaul of an Hedghog or Histrix, acquire a bitter taste from the Gaul? And shall it not also

draw from it, its healing faculties? Why I pray? doth it draw the Cauſe of the Diſeaſe or no? Let us ſee therefore how this happens.

Load-ſtone. 'Tis clear that the Loadſtone draws Iron to it, only by Odor, as the diſtance, through which it draws it, proves; The Radical *Humid*, or Natural *Acid* of the Iron, being very frail, exhales of its own accord, as *Hippoc. Chymic.* ſhews Chap. 19. out of *Hippocrates*. For unleſs the Acid of Iron were of this ſort, it could not be killed by the Stomach of Animals; and by conſequence the filings of it, taken by the mouth would do no good. The Loadſtone is the Mother of Iron, which perceives the ſmell of her Son, becauſe ſhe loves him; but not being ſufficiently ſatisfied with the ſmell of it, for that cauſe it attracts and allures Iron to it; as I have ſhewed concerning *Alcalyes* and the *Mother* of things.

Rubigo Sterilis. But *Rubigoe*, or *Crocus Martis*, though that be alſo the *Son* of the Magnete, yet it is neglected by it, becauſe its *Soul* or *Acid* is departed from it; and therefore his Mother doth not perceive his ſmell and odor: Hence it is called by *Horatius*, *Sterilis Rubigo*. And by how much the younger and newer the Loadſtone is, by ſo much the more ſtrongly and vigorouſly it draws; but the Ablution of it doth not do ſo: Now as the Ablution of the Magnete doth not attract Iron, ſo neither doth the Ablution of the *Hiſtrix's* Stone draw the Cauſe of the Diſeaſe? no not although it were the Mother of a certain Morbifick Cauſe, hitherto un-named.

Whatſoever attracts any thing from afar off, as the Magnete doth Iron, it attracts it for loves ſake, and it always attracts its *like*; and as Vegetable *Alcaly* draws *Alcaly* of *Lime* for making Sope (for this is a true attraction and of a thing like it ſelf) ſo we have ſeen that Gold is attracted (yea plainly is diſſolved and dies, I ſay dies, becauſe the Cadaver ſtunk) by the Mother *Alcaly*, and this is the *Magnete* of *Albertus Magnus* drawing Gold to it (which words a certain fooliſh Doctor taking in a literal ſenſe, turned into a jeer) for ſo ſaith *Bernardus* in the fourth part of his Book, *The Fountain is to it as the Mother; ſhe draws the King and not the King her:*

ber: This was *Paracelſus's* meaning, when he ſaid, that the Magnete (extinguiſhed in *Oil* of *Mars*, that is, Gold diſſolved in the ſtrongeſt Metaline *Alcaly*, its like, then to acquire a ten times greater Vertue) is encreaſed ten times in his force. For unleſs there were a conſent of things, and a mutual natural Love amongſt them, Nature could not ſubſiſt; or if it ſhould be interrupted a while; the frame of Nature in a ſhort ſpace of time would be wholly ruined; for the Son onely would be left in a ſmall quantity, neither would he encreaſe, or be multiplied; ſo that there is no diſcord or diſagreement in Nature, as ſome have taught, but whatſoever is done is done in love; for Nature of her own Genius, doth chiefly covet and deſire to be in the bottom of the Elementated Body, in which ſhe operates, by ſtrengthening its Natural heat and Prolifick Vertues, becauſe it is pervious to all Bodies, as *Great Raymund* witneſſes; which Doctrine and Attraction of Natural Love, I ſhall demonſtrate by the following Experiment in a Mettaline Example (ſince our preſent diſcourſe is of Metals) that it may appear, *Nature to be alike in every thing.*

Oil of *Mars* what?

Take an Ounce of Silver diſſolved by *Aqua Fortis*; coagulate this Solution into a Saline Powder, and caſt this Powder upon Lead melted in the Fire, but not very hot nor quite cold, and in the eighth part of an hour, The *Acid Salt* of the *Aqua Fortis* deſerts the *Silver* and corrodes the whole quantity of the *Lead*, as much as it had loſt of the *Silver* (*i. e.*) an Ounce, becauſe it performes the Office of Metaline *Alcaly* in Artificials; it draws and is ſaturated with the *Silver*, which by a probatory Cupple returns again to Light. Many Learned Men have admired this Experiment, for they have drawn out an Ounce of *Silver* from the *Lead*, and have found the Powder of the ſame form and weight, as they caſt it on; whence they doubted in their opinion, whether it were the ſame Powder of Silver, which they caſt on; from which they could gain much, if the way how the Powder might be refunded into the Body could be found out. But as the Loadſtone draws Iron, ſo alſo *Saturn* (the *Alcaly* in Artificials) draws *Luna*; and when the thirſty Salt of the *Aqua Fortis*, wanting

Aqueous

Aqueous Humidity, cannot be alone, it attracts so much *Lead*, as it had lost of *Silver*. These and the like Operations and Attractions, which I have explained by illustrious Examples, both in my *Hippoc. Chymic.* and in this Book, have been perhaps erst exploded, because the *Metampsychoses* of the *Pythagoreans* hath not been understood.

Metampsychoſis.

On this foundation, the Stone also of the hairy Serpent, newly found out, is attractive; *Kircher* describes it, in his Book intitled, *The Magnetick Kingdom of Nature*, I have plenty of this *Stone* by me, and do apply it to the bitings of *mad Dogs*, to which it sticks strongly for about eighteen hours; and I applied it to another Girl, hurt by a *mad Dog*, for seven days and nights, and yet the Ablution of this Stone had not done the feat, whatsoever these upstart Doctors do babble. And as the Magnete of all the Things and Metals in the World draws nothing but *Iron*, and is delighted with its *Spirit*, (neglecting the *Rubigo*) and the Stone of the *hairy Serpent*, rejoyces to attract the Odor of the Poison, infused by the venomous bitings, but it doth not attract Arsnick, Wolfs-bane, nor any other Poison; so also Jasper draws an Exotick Spirit, which makes an Impetus in Mans Bloud. I have known sometimes *Eyes* troubled with a *Suffusion* of Blood, to have been cured the next morning, upon a Jasper Stone being bound to the neck at night. But as the Ablution of the Magnete doth not draw Iron, nor the Ablution of the Serpents-stone, Poison, nor That of Jasper, the Spirit making the assault, from the Blood; so neither doth the Ablution of the Hedghogs or Histrixes-stone draw out any Malignity from Humane Bodies; so teaches *Galen* in his First Book of *Natural Faculties*, Chap. 14. *Whatsoever things*, says he, *do draw forth the Poison of Serpents, or Weapons; These do shew forth the same Vertue, that the Load-stone hath*; but the Ablution of the Magnete shews no such Faculty, and why then should the Ablution of the Porcupine or Hedghogs-stone? so that these are meer Dreams and Old Wives Fables, imposed upon Great Men. It were better for such dreamers, and for the Art of Physick too, if they did *philosophize* with

Jasper.

the

the Spade, as *Lupius* jeeringly speaks of *one* who was about to dig the ground.

I have said, That the Magnetick perceives Iron at a distance from it, and attracts it by its odor only, provided it be taken out of its Native Oil, for otherwise where it grows, it attracts nothing, because there, in its Native Place, there is no want of the Odor of Iron.

The Island *Elba* is fruitful of Lead-stones, yet it was never seen nor heard of, that it did incommode Ships passing by, nor injure the *Needle of the Compass*, be-because the Mother *Magnete* is there saturated with Spirit of Iron; so also the Stone of the *hairy Serpent*, being saturated with the Odor of the Poison which it drew from the biting of the Mad Dog, receives not beyond its measure, it neglects the rest, and spontaneously falls from the Wound; so that this Stone, according to *Galens* sense, hath an Attractive Faculty with the *Magnete*, but no such Faculty is found in the *Hogs-stone*, and therefore, sayes *Galen*, it hath no Magnetick Vertue: so that it is clear, that whatsoever is devised against the dangerous Diseases of Great Men from the Ablution of this Stone, hath no existence, but in the Brains of the Inventors, but sinks down into a meer *Nullity*, and a dark *Chymera* of ignorance. Serpent's-stone.

But when it is given in Powder, then without doubt, like other Stones, it would attract any *Acid* agreeable to its Nature; as Crabs Eyes draws forth that other Acid which putrefies the Wound: A Sponge-stone, the Acid which Coagulates the *Struma*: The Stones of Perches, the Acid of Urine in the Strangury; Bezoar-stones, the Lypothymick Acid, arising about the heart; The Stone *Ossio Colla*, That Acid which hinders the Conglutination of the Bone, *&c.* All these aforesaid do imbibe the Specifick Morbous *Acid*.

So also the Hedghog or Histrixes Stones, taken by the Mouth, would imbibe its Specifick Acid, which was yet never described or taken notice of by any of these *Approvers*.

But what that Specifick Acid is, which I have spoken of,

The Cauſe of Diſeaſes *Acid.*

of, and which is the Cauſe of Diſeaſes, it cannot be explained in words, as my Doctor ſays, *De Vera Medicina*; who after he had demonſtrated that the Cauſe of Diſeaſes was Acid, yea and moſt Acid; he goes on in theſe words, *There is none of them can be ſeen or known by our Bodily Eyes, and therefore they are called by Me Obſcure; not that they alwayes remain ſo, and exceed our underſtandings, but becauſe they are not found out, but with much labour and in a long time; for thoſe things which are above and beyond the ſight of our Bodily Eyes, The ſame may be reached and fetched in by the Mental Eyes (viz.* of us Chymiſts.)

Hitherto *Hippocrates*, his meaning is, that we muſt gradually aſcend from known things to unknown, as my *Hippocrates Chymicus* ſhews; which doth proceed as it were by ſteps, from Artificials to the Fabrick of Humane Nature; for as I have ſhewed, that the Acid of Iron, though it be ſcarce perceived by the ſenſe, and is found no where but in Iron, being of a ſingular kind, yet the Loadſtone perceives *It* and attracts it even at a long diſtance; ſo alſo there are many, yea infinite Acids in Mans Body, ſome of which are made by the degeneration of the Morbous Cauſe, which are not perceived, nor attracted, by other then their own proper Magnetes; as the Morbous Acid in the Spleen is attracted by no other thing but the *Rubigo of Iron*; the Morbous Acid generating The *Struma*, is perceived and drawn forth by no other (that I know of) but a *Sponge-ſtone*. They may be called *Magnetes*, becauſe they ſcent and attract the fore-ſaid Spirits, as the Magnete doth Iron; and unleſs the aforeſaid Acid Spirits were in readineſs, and were ſmelt or ſcented by their *Magnetes*, they would not be attracted nor abſorbed by Them: So *Gold* is inodorous to our ſenſes, yet it is ſmelt even afar off, by its own *Magnete* or *Mother*, *for ſhe draws the King*, ſays *Bernhard*, *and not the King her*. Upon which occaſion of *Occult* Odors, a convenient opportunity is offered to me to ſpeak of the *manifeſt* Odors of things, for, as I have ſhewed, that the former come from *Acid*; ſo I ſhall alſo experientally ſhew, that theſe latter alſo proceed from *Acid* or Ce-

The Odor of Things.

leſti-

a

leſtial *Calid* : Odors are quiet and at reſt till they be rouzed up or ſtirred; and they are ſtirred, as ſoon as a proper and conſentaneous Humid acts upon the Odorous thing; for then its Odor is preſently ſpread far and near, more or leſs ſtinking or ſweet, according to the Seminal Vertue of the innate *Calid* : which Paradox, before I proceed, I ſhall make plain, by clear Examples, taken out of the Shop of Nature.

Lime is inodorous of its ſelf, but when it is diſſolved in ſimple Water, for the building of Walls, the Acid acts upon the Alcaly, and on the contrary. This Action and Commotion diffuſes and ſcatters a ſmell not agreeable to Mans Nature; and therefore before a Man can dwell ſafely in an Houſe, newly built, a years time had need paſs over, in which time the Action of the Humid upon the Acid will be at an end.

Barley alſo of it ſelf is almoſt of no ſmell, but when its Meal is boiled and fermented for *Beer*; that is, when the conſtituting parts do begin to act one upon another, then they afford an inebriating ſmell; which though it be not noiſome, yet it ſo diſturbs the Spirits, that it prejudices the *Memory*. A *Grape* hath little ſmell, but the Juice expreſſed under the Action of Fermentation, yields a ſmell afar off; ſo doth *Bread* under the Action of Fermentation (*i.e.*) when the Humid acts upon the *Calid*, or the *Acid* on the *Alcaly*.

Acid Fountains themſelves, yet bubbling forth in their Native Soil, do expire a moſt grateful Odor, becauſe the Agent it ſelf is a Celeſtial Acid, friendly to Mans Nature.

So *Vinegar*, when it corrodes any thing, as *Coral*, for Example, ſmells more ſtrongly than when it was at reſt.

Amber is pinguous and of a moſt ſluggiſh ſmell, you can ſcarce tell that it gives forth any ſmell at all, becauſe its *Calid* or *Acid* is the leaſt part in reſpect of the *Radical Humid* or *Alcaly*; but when it is ſtirred up and excited by Solution, with a juſt proportion of Odors and convenient Fat, *v. g. Zibeth* (the purer and ſincerer it is, *Amber.* *Zibeth.*

the more acute and ingrateful is its ſmell) then the torpid *Calid* of the *Amber*, being excited by the *Zibeth*, begins to act upon the Humid, and upon that Action there ariſeth a moſt ſweet ſmell: as for Example, Pound ten Grains of *Amber*, and three Grains of *Zibeth* in a Mortar, and the *Amber* preſently melts; upon which, for encreaſing the *Acid*, inſtil a drop or two of Juice of Lemmons, and by this means you will have an unguent of an admirable ſuavity, which rubbed upon the Skin yields an incredible Odor.

Musk. So *Musk*, by how much the purer and ſimpler it is, it ſmells ſtrong indeed, but 'tis a bad ſcent, or at leaſt not a very good one; but when it is diſſolved with ſome drops of *Ardent Spirit of Roſes*, which I have proved to be *Acid*, 'tis to be admired what a fragant ſmell it will afford. Three Graines of this Musk ſo diſſolved, being added to the aforeſaid Solution of *Amber* and *Zibeth*, you will hardly find a more odoriferous thing; but I have ſhewn, that the harſh ſmell of Lime, Beer, *&c.* is noxious to many Men, ſo alſo this ſweet ſmell is an enemy to many both Men and Women: Thoſe that are troubled with Uterine Diſtempers, or Diſeaſes of the Lungs, cannot endure it; which Diſeaſes, according to *Hippocrates* proceed from Acidity; for when the ſmell, though ſweet, reaches from the Noſe to the Womb, preſently the Dormant Morbous Acid, which is in the Womb, is excited by meanes of the Ferment, *for like hath an eaſie ingreſs into like*, as *Fire to Fire*; as we ſee in a Candle newly blown out, whoſe pinguous Fume eaſily takes flame again, which is nothing but kindled fume; ſo alſo Diſeaſes of the Womb are more eaſily excited and inflamed by Odors which are fermentable: which fermentation in the Womb, may again be allayed and overcome by thoſe Odors which are ſtronger, and prevail over thoſe which are excited; as the greater flame overcomes and extinguiſhes the leſs, and the leſs Light is put out by the greater; as I have before clearly demonſtrated in Acid Minerals, which overcome Thoſe of Vegetables, and Theſe again do ſuppreſs Thoſe of Animals:

De Veteri Medicina.

Uterine Diſeaſes.

mals: So also Womb-diseases being excited by suaveolent Odors, begin to ferment and to boil up with great violence; and These again are suppressed and killed by *graveolent* things. In Physical Practice, it is observed, that the *Matrix*, of its own Nature, at the smell of sweet things, is turned upwards or downwards, if the same sweet Odor be applied below; if then it be elevated upwards, and its capacity be blown up, and distended by flatulent vapours excited in it, then the *Diaphragma* is straitned; which being compressed by much wind, hinders Respiration and Speech, so that the *Patient* is at Deaths door; for a *Cure* in this case all sweet-smelling things are carried out of the Chamber (lest their smell should arrive at the Nostrils of the Sick Woman) and they are applied to the *Vulva* of the *Matrix*, that by the sweetness of the Odor it may return down again; (which arises from hence, that the Womb is delighted with and greedily turns it self to sweet smelling things:) and Odors are applied to the *Nose*, which by their vehemency may over-power, or wholly kill the sweet Odor attracted (as I have a while ago shewed of Acid Liquors) as *Assa Foetida, Castoreum, Oppoponax, Sagapenum, Oleum Petræ, Oleum Tartari Distillatum*, and the like; or else such things as being drawn in and smelt to by the Nose, can mortifie the inward sweet Acid of the Ferment by its contrary; and these are Volatile Alcalyes absorbing the suave-acid Odors of the Womb: As for Example, the smoak of things burned, taken from the Animal Family, for they being burned, do breath forth nothing but Volatile Alcaly, which is destructive to and a consumer of Acids. But Women (led rather by superstition than reason) chuse Partridge Feathers, and Goats Horns (perhaps, because taken from Salacious Creatures) Hairs, Leather of Old Shoes, or Urine of a stinking Chamber Pot, all expiring *Volatile Alcalyes* (which I have shewed to be contrary to and destructive of Acid Fermentation) the least part of which Odors being attracted by the Nostrils, presently the Sick Woman revives, and begins to be better, because the Uterine

Volatile Alcalyes.

Ferment is restrained by its contrary; for Fermentable Odor, as it is easily mixed and makes Ebullition with its like; so by its unlike, it ceases from the Ebullition. This is the meaning of that of *Hippocrates*, *De Diæta*; when he says, out of *Pythagoras* his School, *He that believes not one Soul to be mixed with another, is besides himself.*

The smell of a Rose is acceptable to some, but pernicious to many; hence a *Rose* is said by *Pliny* to be of an Angust Odor, *Lib.* 21. *Chap.* 41. I knew an honest Citizen of this place, who, as often as he *scented* a Rose, though afar off, his Breast was not only griped and straitned, but he was troubled with a *Coryza* many days after.

Syrup of Roses. Syrup of Roses solutive, inconsiderately taken by the Mouth, how often hath it caused *Deliquia's*, or Swoonings? especially in such Women whose Noses are quick-scented; yea, it hath caused their Bowels to tremble inwardly, as Practicioners have observed.

There are some who cannot digest the Herb *Selenum*, some that cannot concoct Spices, but resist their concoction by continual belchings: All which things my Wise *Master* observing, advises those who practice Physick, *Aph.* 28. *Sect.* 5. In this manner, *The smell of Aromatical things draws the* Muliebria, *and it would often be good for other things too, unless it occasioned the heavines of the Head*; where we must observe out of *Columella*, Lib. 12. chap. 20. That he takes *Odors*, and *Aromata* for the same things. Hence *Lucretius* speaks of himself, *I perceive diverse Odors of Things, yet I could never see them coming to the Nostrils*, Lib. 1. chap. 60. Our Acute *Galen* comprehending all these things in his Book, *De Victus Ratione*, thus concludes, *Odours do both good and hurt*; which Sentence of *Galen*, I have a little before shewed to be exactly True in Uterine Diseases, as the Female Sexe can testifie. For Fermentable Odour, which all Aromaticks do expire, and which is multiplied by Fermentation, hurts many; and on the contrary, Alcalizate Odour, and That which is excited from the burnt parts of Animals, because

becauſe it is deſtructive of the Ferments, profits and does good to many; as we ſee by daily experience and uſe; ſo that every *ſmell* is to be diſtinguiſhed and reduced to its proper *Claſſis*. This was *Hippocrates* his meaning *de Virginum Morbis*, *'Tis not poſſible* (ſays he) *to know the Nature of Diſeaſes* (if they are knowable by Art) *unleſs a Man knew Nature in indiviſibility, from which in the beginning they were diſtinguiſhed.*

All theſe things being conſidered, it appears, why Venerable Antiquity hath preſcribed to us for a weak and languid Stomach, that compound Inodorous Medicine, called *Syrup of Wormwood*, that it might be of uſe to every individual? This, becauſe it is made up of ſimples, as of Pontick Wormwood, which is of an Aromatick and Aſtringent Taſte, of Roſes, *Indian* Spike, moſt Odorous Plants, of Old Wine, of Juice of Quinces likewiſe binding, and Sugar, therefore they commanded them all to be boiled in an Earthen Veſſel being open, That ſo the Volatile Spirit of the Old Wine might carry off the Aromatick Odors, both of the Spike, as alſo of the Wormwood and Roſes; and ſo the Odors, as *Galen* ſays, can do no hurt to thoſe, who otherwiſe are not able to bear them (words in my *Hippocrates Chymicus* Chap. 30. either not underſtood, or malignantly changed) and their Syrup may help a weak Stomack, not by the Odorous Spirit of Wine, but by a moderately Aſtringent Faculty. This is the reaſon why ſuch a Syrup was found out, as the *Text* witneſſes: From whence we learn the deep Judgment and diligent Obſervation of our *Predeceſſors* in compounding of Medicines, and why they appointed this Syrup to be *Inodorous?* See for this the *Tetras* of *Quercetan*, conſult all Practicioners, and the *Truth* of the thing will appear; which, by how much the more it is oppreſſed, by thoſe that hate it, ſo much the more gloriouſly it triumphs and treads down *falſity* under her feet. For it is not enough, out of meer ignorance to condemn the memorable Obſervations of the Ancients faithfully made, by long ſtudy and many watchful lucubrations, and ſo tranſmitted

Syrup of Wormwood.

mitted to us, and farther by unuſual clamours without any known reaſon and cauſe to *Reform* them; defaming alſo all ſuch who tread in their ſteps: but Men had need to demonſtrate the contrary, if not by Authority and Experience, yet at leaſt by reaſon; otherwiſe all their ridiculous and inept approbations, together with their abſurd clamours, will not only be judged to be falſe and vain, by Wiſe and Underſtanding Perſons; and therefore worthy to be ſent packing from whence they came: but will alſo be reckoned by the Vulgar amongſt futile and ſordid *devices* and *fogeries* and the higheſt *levities*; for ſo indeed they are. 'Twas never read in the Writings either of the *Old* or *New* Interpreters of Nature, that They taught, That *Diſtilled Vinegar was Celebrated Spirit of Venus, or was as Alcaheſt*; *That* the Poiſon of Copper, extracted by Vinegar, was an Epileptick, or Hyſterick Remedy; *That* Elementary Water was Volatile Salt of Tartar, and a *Panacaa* for diſperate Diſeaſes; or *That* Corals, which both by Wiſe Men and by Ideots too, are reckoned amongſt Gemmes; ſhould be compared to Common *Corroſive Calx*, and pronounced unuſeful; or *That* the Vinegar diſtilled from Meal was Acid Spirit of Sal Armoniack; or *That* Minium could condenſe the Air into a Ponderous Body; and many hundreds more of ſuch falſities, deſtructive to Mankind, and worſe than the dotages of frantick Perſons; which beſides the corruption of good manners, can hardly be read without tediouſneſs: ſuch things, I ſay, and others like them, were never taught by our Anceſtors, and yet though they are found moſt falſe, by Experience, Reaſon, and Authority, and to be to the detriment of Phyſick and Mankind; nevertheleſs They are approved and cryed up by our fore-ſaid Magnifick Doctors. Hence it is, that *Ariſtotle* in a paſſion commands *Scioliſts, to dip their Pens in their Minds, before they do it in Ink, leaſt one inconvenience being granted, a thouſand falſe concluſions do follow*: As not only the Studiers of Ancient Phyſick do find to their great detriment, but Phyſick it ſelf (and that which is more to be lamented, the Sick)

ſuffers

ſuffers under ſuch things, as manifeſtly appears in the *Syrup of Wormwood*, which the Ancients appointed to be made without any ſmell, that it might be given for an Aſtringent to every individual; as clearly appears by the Reaſons and Experiences juſt now alleaged: but *Theſe* men, againſt the inſtitutions and precepts of Medicine, yea againſt the order of Nature her ſelf, do mixe it with Aromatized Spirit of Wine and that moſt odoriferous, and do ſo preſcribe it, being induced thereunto, by this falſe and vain opinion, *That Odors are good indifferently for all, both Men and Women.* But with what fruit or profit they ſo think, Let Practicioners ſpeak, and let thoſe judge who have but the Spirit of a Man in their Breaſts, and who have ever ſeen the Female Sexe troubled with Uterine Diſtempers. I confeſs in a pedantick ſlaviſh Writer, this error were tolerable, and need only ſimple correction; but it is an abominable wickednels, and not to be endured in the *Deans* and their *Colleagues*, who ſore at ſuch *High* things, and boaſt that they can teach others Skill, themſelves being in the mean time ignorant of the common and ſafe way of healing, preſcribed by *Galen*, as I have ſhewed. For if, the Ancients (whom they inſult over) could find out Syrup of Wormwood, and Syrup of Quinces, as we ſee in *Dioſcorides*, what difficulty had it been for them to add odoriferous Spike and Roſes, if Odors and Spirit of Wine had been uſeful in this Compound? It appears by this, that They knew well *a Dog from a black Sheep* (to ſpeak proverbially) and could diſtinguiſh things, that ſmelt of Garlick, of the Hogſty, of the Sow and Goat mixed together. I have ſometimes admired, why not only *Hippocrates* enjoyned that we ſhould only ſpeak of Thoſe Things, which are known to Plebeians, but that *Arnold*, *Holland*, and many others have ſo induſtriouſly concealed the Ancient Foundations of this Art? Yea, heretofore *It* was confined only within the Family of *Æſculapius*; but my wonder ceaſes, when now adays I ſee the Truth judged, condemned, and caſt out of doors, by Thoſe who are bound to advance it, for their

Neighbours

Neighbours good; and this not by choice of Doctrine or Science, but by a meer fit of fooliſh temerity, before they underſtand the cauſe of the matter, as I have evidenced in this whole Tract from the beginning to the end very copiouſly; not by opinion only, as Southſayers do, but by clear Reaſons, Authority, and Experimental Operations. Wherefore let ſuch Putative and Inſipid Doctors be hiſſed out of the Theatre of Wiſdom, and caſt forth unto their ſluggiſh Colleagues, together with their emendicated and inept Receits, ill underſtood and falſly approved; That ſo the Ancient and True Hippocratical Phyſick, the Nobleſt of all Arts, may be redeemed from the contempt of the Vulgar, and by degrees may recover its Ancient eſtimation and luſtre.

The Concluſion.

Take therefore in good part, O ye Curious Readers and Lovers of the Ancient Truth, this my *Clavis*, which I ſincerely and faithfully offer to you, by the help whereof you may unlock and open the Ancient Cabinet of *Hippocratical Medicine*. Sluggiſh Doctors, who by their ulcerous, yet *reforming* Doctrine, do endeavour to pervert Natures order, and to hinder the progreſs of *Hippocratical Phyſick*, to their Neighbours detriment, are converſant in thick darkneſs, far from the Light of Truth, who not being able to get out from thence by their own ſtrength, do ſtudy how to lacerate and revile the fame of their Predeceſſors, yea the works of Nature it ſelf, that they may obtain a Name and Praiſe amongſt ſuch as are like themſelves. 'Tis wonderful to conſider, how far this mad rage of evil ſpeaking hath extended it ſelf (by occaſion whereof the unſhaken Wiſdom of the Ancients ſhines forth with greater luſtre, and the fundamental Verity and Excellency of the moſt Noble Hippocratical Phyſick doth the more appear:) ſo as laying aſide all modeſty, Men dare petulantly to riſe up againſt the minds of *Hippocrates* and *Galen*, yea againſt the Truth it ſelf, againſt Experience and the Law of Nations, and openly, to their perpetual ſhame, to extol, ſubſcribe,

and

and approve, miserable fooleries and false receits, to the damage of their Neighbours and their Posterity.

Wherefore let the unprejudiced Reader weigh with an equal ballance and indifferent mind, This Ancient Doctrine of Truth, and Firm Foundation of our Fore-fathers, which are laid and established in my *Hippocrates Chymicus* and in this *Comment* upon it, according to their mind and opinion; and then I doubt not but he will pass an equal Sentence: for he will find all my Experiments deduced from the same Fountains from whence the Venerable Ancients and the more Novel Interpreters of Natures Secrets have drawn *Theirs*, and therefore in no sort fallacious; yea he will find a necessary connexion of Causes amongst themselves, so as some depend on others, the last on the first, the inferior on the supream, the less on the greater, the weak on the stronger, according to the Wise Series of Nature; and that all things are increased, preserved, and destroyed by mutual commutation, digestion, and fermentation; and again how they rise up into new beings before our eyes, as saith *Hippocrates de Diata*. And as I have shewed Mechanically, that such things must infallibly be in the *Macrocosme*; so I have concluded by just reason according to the Opinion of the Ancients, and by evidence of Experiments, that they must be so in the *Microcosme*; so that Diseases are caused by this method, and by the same method they are cured, since Art imitates Nature, and Nature Art, according to *Hippocrates*; whose Ancient Doctrine, underpropped by the firm Principles of *Fire* and *Water*, I hope as long as I live, to defend by my self alone, against all unjust invasions and assaults; for in doing hereof, I shall not need in a meretricious way, the assistance of many flattering woers, as the destroyers of this Noble Medicine do.

Hermes in Schedula.

But if any Man accuse the Inelegancy of my Stile it shall not trouble me at all; I give leave to every Ignorant Fellow to bark, prate, and raile; for I fear not the buzzing of such *Hornets*: indeed for their greatness and multitude they are terrible, but their *Stings* are out;

and let them do what ever they will or can, yet they shall never get the victory. Let me tell thee this one thing, O Man, such as thou art, so think thy self to be; and as far as thou art remote from the turpitude of *Things*, stand at the same distance from the Licentiousness of *Words*; and moreover, speak not that falsly against another, which, when it is answered, may cause thee to blush. I know how to defend my self (to speak without boasting) as well as another, yea I know how to return opprobrious speeches to others, if I so pleased, and would indulge my self that liberty. But here, friendly Reader, I conclude, since my Book may not justly be extended to a greater length; but hereafter I shall speak to thee in a graver Tone.

Cicero.

Horatius.

FINIS.

Shew me better, if thou canst (before thou carp at mine) and I shall give thee thanks.

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FINIS.

An Advertisement concerning the *ERRATA.*

In regard the Translator could not at all attend the Press during the whole time of the Impression, several mal-punctations and literal mistakes have happened; which are left to the Reader's candor and ingenuity to amend with his pen: But the Errata *which do most affect the sense, are these which follow:*

In *HIPPOCRATES CHYMICUS.*

Page 15 *l.* 7 *read* in *for* into; *p.* 14 *l.* 10 *r.* command *for* commend; *p.* 16 *l.* 7 *r.* it ran into Chrystals as Nitre, *for*, it was chamfered in its coalition as Nitre; *p.* 17 *l.* 20 *r.* In Alcaly of Tartar is made Nitre, *for* in Alcaly is made Nitre of Tartar; *p.* 20 *l.* 34 *r.* in a Test, *for* in an Earthen Pot; *p.* 21 *l.* 10 *r.* the Covers of the Test, *for* the Earthen Covers; *p.* 21 *l.* 5 *r.* allayed, *for* bound in; *p.* 22 *l.* 27 and 34 *r.* Neighbour Vessel, *for* Neighbours Vessel; *p.* 23 *l.* 22 *r.* to fall *for* to run; *p.* 27 *l.* 3, *l.* 7, *l.* 9, *l.* 13, *r.* plate *for* slate; *p.* 39 *in margine r. c.* 6. *for* l 6. *p.* 40 *l.* 10 *r.* from Acid into a Lacteous Salt Chyle, *for* from an Acid Salt into a Lacteous Chyle; *p.* 41 *l* 18 *r.* precede *for* proceed, *p.* 42 *l.* 22 *r.* apart *for* part; *p* 43 *l* 33. *r.* in all vacuities *for* all vacuities; *p.* 44 *l.* 14 *r.* bitter *for* better; *p.* 45 *l.* 32 *r.* with all its strength, and is grateful, *for* of great strength, and is grateful; *p* 45 *l.* 15 *r.* there is acidity in the Stomach, *for* the acidity in the Stomach; *p.* 48 *l.* 2 *r.* Liquor for dissolving the Stone with *Ludus*, *for* a Liquor for the Stone *Ludus*; *p.* 52 *l.* 30 *adde* more dark; *p* 56 *l.* 21 *r.* Spirit *for* powder; *p.* 67 *l.* 28 *dele* e; *p.* 70 *l.* 23 *r.* simples *for* simply; *p.* 73 *l.* 30 *r.* as in *for* in; *p.* 75 *l.* 18 *r. Homuneulus for* man; *p.* 78 *l.* 17 *dele* of the; *p* 76 *l.* 34 *r.* constancy *for* consistency; *p.* 78 *l.* 32 *r.* things *for* salts; *p.* 79 *l* 37 *dele* their; *p.* 84 *l.* 23 *r.* petochiales *for* petechiales; *p.* 83 *l.* 2 *r* one acidity alone, *for* acidity alone; *p.* 85 *l.* 34 *r. Itium* for *Irbium*; p. 88 *in margine r.* mumial *for* mumail; *p.* 90 *l* 5 *r.* Acid and Salt *for* Acid from Salt; *p.* 102 *l* 14 *r. Campanam*; *p.* 108 *l.* 3 *dele* the; *l* 5 *r.* into *for* in; *p.* 113 *l.* 18 *r.* Nitre *for* Glass; *p.* 118 *l.* 30 *r.* impertinently *for* impatiently.

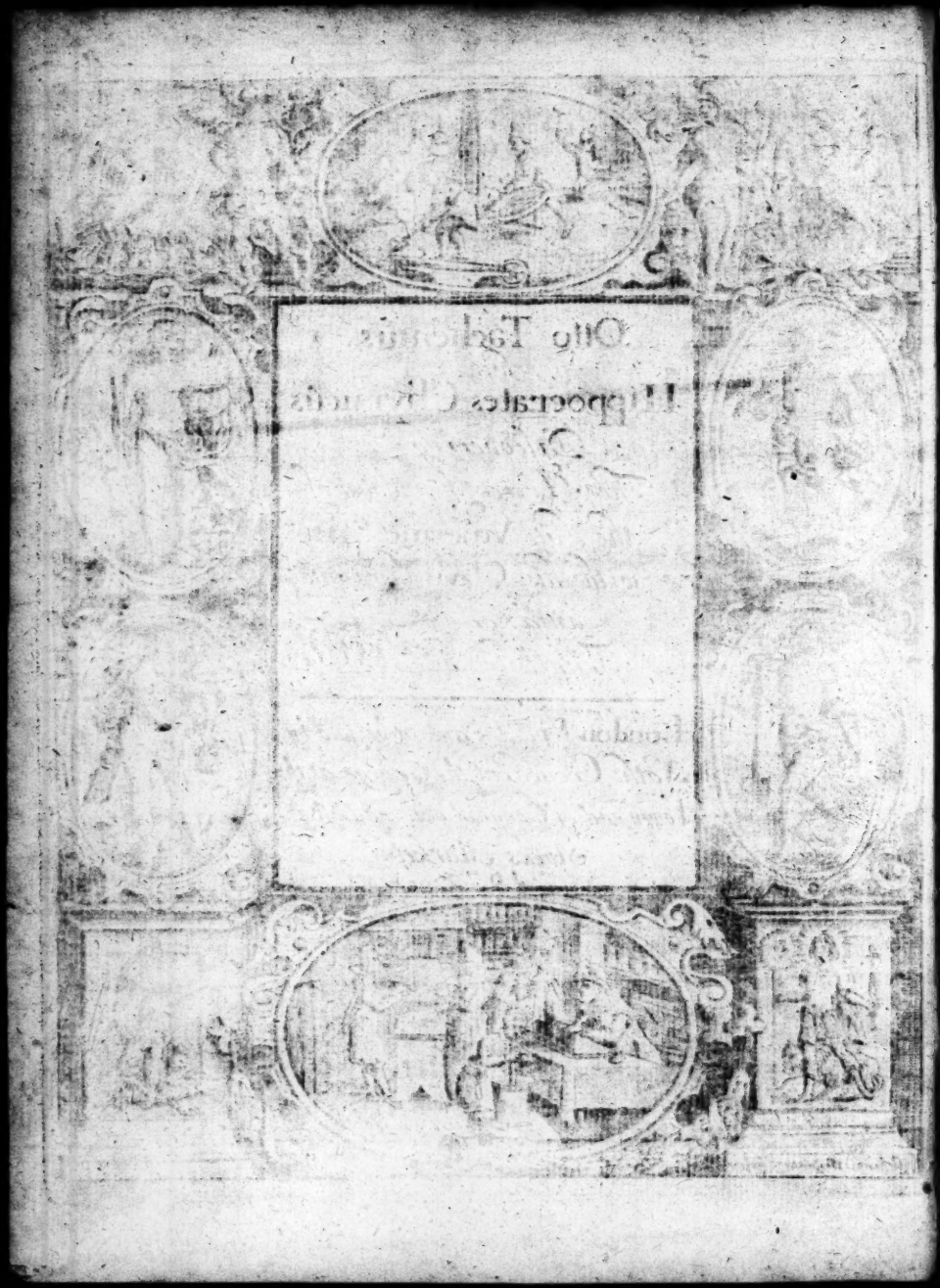
In the *CLAVIS.*

IN *the Epistle r.* favourer *for* seavourer; *p.* 3 *in margine r.* Sun *for* Son; *p* 11 *l.* 27 *r.* is coagulated *for* as coagulated; *p.* 13 *l.* 4 *dele* comma, *after* Salt; *p.* 18 *l.* 3 *r.* Sun *for* Son; *l* 35 *r* Acids imbiber *for* Acid an imbiber; *p* 24 *l.* 31 *r. apluda* for *aplauda*; *p.* 28 *l* 2 *r.* Salts *for* Stals; *p.* 27 *l.* 25 *r.* Acid *for* Alcaly; *p.* 25 *l* 7 *r.* catch not flame *for* catch its flame; *p.* 31 *l* 17 *r.* can *for* cannot; *p.* 33 *l.* 24 *r.* covets the bottom *for* covets the fire; *p.* 36 *l.* 33 *r.* lured *for* plated; *p.* 38 *l.* 9 *r.* educed *for* reduced; *p.* 40 *l* 4 *r.* had *for* hid; *p.* 54 *l.* 6 *r.* Mercury simply dissolved in *Aqua fortis*, and precipitated, *for* Mercury and simply dissolved in *Aqua fortis* precipitated; *p* 58 *l.* 9 *r.* to whom *for* from whom; *p.* 59 *l* 26 *r.* which though it be inflameable, is yet Acid, *for* yea, though it be inflameable; *p* 66 *l.* 15 *r.* coals *for* corals; *p.* 83 *l.* 22 *r. Pluto* for *Plato*; *p* 33 *l.* 14 *r. mystæ* for *mixtæ*; p. 97 *l.* 1 *r.* muscle *for* male; *p.* 98 *l* 39 *r.* ferment, *v. z.* Acid, *for viz* Ferment either, *&c. p* 102 *l.* 6 *after* attributes *insert* (*i.e.*) various Acids; *p* 107 *l.* 9 *after* Son, *insert*, of the Sun; *p.* 109 *l.* 3 *r.* magnet *for* magnetick; *l.* 5 *r.* soil *for* Oil; *p.* 115 *l.* 7 *r. indivisibili for* indivisibility.



Otto Tachenius.
his
Hippocrates Chymicus
Discovering
The Ancient foundation of
the late Viperine Salt
with his Clavis thereunto
annexed
Translated by J. W.

London Printed & are to be sold by
Nath: Crouch. at the George at the
lower end of Cornhill over against y^e
Stocks Market.
1677.



THE TRANSLATOR TO THE READER.

THe Author of these Ensuing Discourses, who is, as 'tis hoped, yet Living at *Venice*, hath his Name in an high degree of Merit amongst the Prime Physicians and Chymists of this Age; His knowledge in the *Spagyrical Art* (in the judgement of those Learned and Sagacious persons, who have Studied the Controversie betwixt Them) far exceeding *That* of *Zwelfer*, his Antagonist; who during this whole Treatise, goes under the name of the *Reformer*, for the reason mentioned p. 2. The Translation it Self was not performed without Labour and Sweat, partly because the Editions which were made use of, one from *Brunswick*, the other from *Leyden*, were very unperfect and incorrect; partly also, because, The Author being more intent on *Matter* than *Words*, on *Things* than *Expressions* ('tis his own Apology, p. 4.) doth sometimes leave his Sense to be picked out by the Analogy of his Doctrine. If morose and supercilious Censurers shall object Impoliteness, Solœcisme, Inept Cadencys and Cohæsions of Words and Sentences; Obscurities, length of Parentheses's

ses's, and other flawes usually incident, or at least imputed to Translations: In bar to such Hypercriticks, I offer the particulars following, *viz.* *That* every Language hath its *Idiom*, which is not properly transferrable to another; *That* a *Translator* is no *Paraphrast*, but being limited to the *Sense*, and in great part confined to the *Words* of his Author, hath no allowable Liberty to make Excursions, or to add any explanatory Embellishments to another Man's *Work*: It is *his* Province to write by the Copy before him (*i. e.*) to Vestigate and Overtake the Author's Sense, and faithfully to render it; which I hope is here, not unhappily performed; As for the *Obscurity* objected, The *Doctrine* it self must bear part of the *Guilt* (if any be) For *That* being *Novel*, or at least retrived from Antiquity, may not perhaps be so clearly and Apodictically explained in a *Compendium* (which the Author intimates more than once) as to stop the Mouths of all Gain-sayers, though plainly enough (especially with the addition of the *Clavis*) to satisfie the Reasons, and convince the Judgements of Candid and Ingenious Readers. Lastly, Since 'tis an easie thing to be Witty in another Man's Labour, I shall conclude with the Poet,

Carpere vel noli nostra, vel ede Tua.

J. W.

THE

THE PUBLISHER TO THE READER.

THis Book, as to the *Translation* of it, hath been sufficiently perused, justified, and approved by some of the most learned and experienced Chymists in and about this City: As to *the Matter* of it, it needs no other Commendation than the long since allowed and printed Observation and Approbation of the *Royal Society of England*, in these words;

Philosophical Transactions, Aug. 16. 1669. Num. 50. page 1019.

OTTONIS TACHENII Hippocrates Chymicus *Venetiis in* 12°.

THis *Author*, though Printed two or three years ago, came not to our knowledge, till now. He in his *Tract* endeavours to justifie the Ancients blamed by *Zwelfer*, in his *Pharmacopœa Augustana*, for having committed several faults in the preparation of a certain *Salt*

called

call'd *Theriacal*, because extracted out of *Vipers*, and diverse other Ingredients composing *Theriack*; and having done this, he thence takes occasion to Treat of the Nature of *Salts*, especially of *Alcalyes* and *Acids*, which he, with some other Chymists, holds to be the first Principles of all mixt Bodies: And being perswaded that *Hippocrates* was also of this opinion, and a great Chymist too, he Entitles His Book *Hippocrates Chymicus*.

Though the Salt *Alcaly* properly signifieth that Salt which is drawn out of the Ashes of an *Egyptian* Herb, named *Kaly*; yet Chymists take it in a larger Sense, and understand by that Word all the Salts, which, like that of the said Herb, draw and impregnate themselves with *Acid* ones. To this Salt our Author refers almost all the Operations of Nature, and having examined its properties, relates divers, not Uncurious Observations concerning it.

For Example, That nothing pierceth so much as *Alcalyes*, and that therefore Nature hath stored the *Sweat* of Animals so plentifully with it, for that the Ordure which continually gathers on the Skin, would soon stop the pores of it, if the *Sweat* were not furnish with some effectious Dissolvent to open and pierce Them; Whence he observes, that the best liquored Boots, and such as are Water-proof, will be quickly pierced by the Sweat of Horses; adding, that though Riding-post, he had, to avoid that inconvenience, rubbed his Boots with a *Vernice*, which resisted even to *Aqua Fortis*, not the Sweat of the Horses he rode undissolved that first day of his Voyage.

Next,

Next, He holds it to be an error to use *Spirit of Vitriol* for whitening the Teeth, Experience shewing that from the mixture of an *Alcaly* and *the Spirit of Vitriol*, there results a yellow; and that there is an *Alcaly*, continually transpiring out of the Gums, as out of all the other parts of the Body; whence it must follow that the *Spirit of Vitriol* employed to rub the Teeth, when mixt with that Salt, must tinge them of the same colour.

Then he affirms, that Wood *rotten* hath no *Alcaly* in it, and that it rots not, but upon the account of the exhaling of that Salt, Whence 'tis (*saith he*) That the *Venetians* to harden the Timber designed for building of Ships, sink it green in Water, and there leave it many years, which is the cause, That the *Alcaly* having been hindred from exhaling, the Timber rots not, but becomes as hard in a manner as *Stone*.

We cannot pretermit taking notice, That this Author finds occasion in this Book to explain the way, by which the Famous *Turnheiser*, a *Germane* Chymist made that celebrated *Nail*, half Gold and half Iron; which is shewed at *Florence* in the Repository of the Great Duke of *Tuscany*. 'Tis said, that *That Chymist*, having in the presence of that *Prince*, immersed in a certain Oyl, the one half of a Nail which appeared to be all Iron, that part which touched the Oyl, was instantly found to be good Gold: Several persons having examined this *Nail*, and seeing the Gold and Iron, exceeding well conjoyned, were perswaded that it could not well be effected, but by a true change of one of those two Metals into the other; believing it impossible they could be So-

dered together. But the *Author* of this Book maketh that a very easie thing, if the Iron be before prepared after a certain manner, which He teacheth; and He pretends, That That was the whole Secret of *Turnheisser*, the rest being nothing but Illusion; for after he had by that means Sodered together a piece of Gold with half a Nail, He knew so well to give the colour of *Iron* to *Gold*, that Men believed that the whole Nail was of Iron; and having afterwards put this Nail into the Fire, and held it in the Oyl, to take off that colour, he made appear that *Gold*, which was hid before.

To

To the Most Serene and Mighty PRINCES,

The LORDS { *George William*, *John Frederick*, *Ernest Augustus*, } Brethren.

By the Grace of GOD, DUKES of *Brunswick* and *Lunenburg*, &c.

His Most Bountiful LORDS.

Pondering often in my Mind (High and Mighty Princes, and my Noble Patrons) the Great and many Favours which Your Grand and Prince-like Liberality hath most Graciously heaped upon me, and thereby Eternally obliged me to Your Excellencies; I became solicitous and concerned in my thoughts, with what Veneration and Industry of Wit (answerable to the Obsequiousness of my Devoted mind) I might declare by some Testimony, at least, an endeavour of Gratitude for Your Benefits bestowed upon me. 'Tis the guise of Others in Dedicating their Lucubrations to Princes and Nobles, chiefly to concern themselves in Blazoning their Genealogies, *and in Decyphering their Praises and Heroick Acts, in an high Method of Elegancy, thereby extolling them (as we say) with an open mouth to the Skies. But I (well knowing that the full-blown Elogies of Talkative Fame, do displease Your* Excellencies, *especially since glorious and memorable* Vertue *it self, for so many Ages backward (together with Magnanimous Bounty) have flourished in the most August House of* Brunswick and Lunenburg, *and by God's*

Blessing will ever flourish in the same) I, I say, waving therefore all such Proceedure do come only furnished with a gift not large, nor great (though you are worthy of both) nor glittering with Gold, Silver, or Precious Stones, Ornaments which (Divine Bounty hath abundantly replenished Your Highnesses withall, but) are denied to me, *and persons of my condition: Mine is only a Paper gift, but extracted from the true Protochymick Art, which is most Ancient, and hath more in the* Recess *than it promises in the* Front: *Yea it is That, by which the uncreated Spirit, the Founder of the World did order and distinguish the (otherwise) confused Natures of things. Hereupon I perswaded my Self, that I could offer no gift more grateful to Your Highnesses, than a new work of this most Vetust, yet Wonderful and Necessary* Science. *A Work most curious in it self, which hitherto Envy hath forborne to restore, and to gratify the World with: For although the unconquerable* Truth *comes commended only by its own strength, and is sufficiently fortified by its proper and native Vigor (for nothing can subsist, which is not* firmed *in the very Foundation of Nature) and so enjoys this invincible Patronage; yet the plain Purity of my Writings being Dedicated to Your* Eminencies, *and thereby armed with so great Splendor, thus doubly strengthened, will appear more boldly in the face of the World. Accept therefore (most Noble Princes) this Diminutive Gift for the bare* Title's *sake, and go on, if not entirely to love, yet somewhat to respect and favour,*

VENICE *the Ides*
of May, 1666.

Your Highnesses most
Devoted Servant,

OTHO TACHENIUS.

THE

The PREFACE to the Courteous READER, And Lover of the Ancient Doctrine of HIPPOCRATES.

HIppocrates, *That bright-ſhining Light of Phyſick, did wrap up His Divine Oracles in* Ænigma's, *and with an Obſcure Brevity, related his Precepts in all the parts of his Works; So that his Inſtructions and Aphoriſmes, by reaſon of their Obſcurity, are wreſted by Writers into diverſe Senſes; ſome of which* Galen, *with wonderful Skill and comely Order, hath digeſted into* Chapters; *but otherſome, eſpecially the* Golden Book De Diet, *which is full of Myſteries, he hath left untouched. For the Divine Old-Man bequeathed* Thoſe *only to the followers of* Chymiſtry; *which* Art *was heretofore, and perhaps in* Hippocrates *his time, called* Natural Philoſophy. *For who can underſtand the rare ſayings of that Old-Man, or comprehend the* Soft Fire *mentioned by him, unleſs he be well verſed in this Occult Natural Philoſophy of* Hippocrates. Raimund Lully *gives his Atteſtation hereto; for, ſays he,* Though a Logician may have as profound Wit, acquired, or natural, able to argue concerning outward things, yet he can never underſtand by any Reaſon grounded on Senſe, how the Seed in the Earth doth germinate, increaſe, and brings froth Fruit, unleſs, being aſſiſted by experimental Learning, He firſt have made ſome progreſs in Our Natural Philoſophy, rather than in That Sophiſtical Wordy one, which Logicians do attain to, by ſundry Phantaſtical ſuppoſitions and preſumptions; who thereby, with the Prognoſtications of their ſequels againſt the force of Nature, do cauſe many Men pertinaciouſly to err, through an intoxicated Mind. But by our Mechanical Science, the Underſtanding is rectifyed in point of inſight, and of true Mental Knowledge, by the force of Experience: Yea, Our Experiments are ſuperior to all phantaſtical Probations of Concluſions, and therefore admit not of Them, but do ſhew the way how all other Sciences may enter vigorouſly into the Underſtanding. Whence we further learn by Nature, that In-

The Writing of the Ancients were like the Oracles of *Apollo*, Ænigmatical.

Teſtam. chap. 26

Inward thing, That it is, and What it is; becauſe by ſuch Science the Underſtanding is freed from thoſe ſuperfluities and errors, which do ordinarily carry it off from the Truth, by reaſon of thoſe preſumptions and prejudices which are believed in the Concluſions. Hence it is, that Our *Chymiſts* have directed themſelves through the path of every Science, to enter into all Experience by Art, according to the courſe of Nature in her Univocal Principles. For 'tis only Chymiſtry, which is the Glaſs of the true Underſtanding, ſhewing it how to feel and ſee Truths in a clear light, and therefore *Tabula Smaragdina* ſaith, By this kind of demonſtration all Obſcurity is baniſhed and expelled from Man, *&c.*

Lib. 1 *de Diæta* Hippocrates *points at the foundations of this moſt* Ancient Art, *in the beginning of his aforeſaid Book.*

All other living Creatures, *ſays he*, as well as Man, are conſtituted of Two principles, different in faculty, but concording, and joyntly fit for Uſe, Fire and Water: Both of Theſe together, are ſufficient both for all other things, and alſo for themſelves mutually; but either of them ſeverally and a-part, is ſufficient neither for it ſelf, or any other, *&c.*

It is my purpoſe in this *ſhort* Tract, *to expoſe to View thoſe two, hitherto* Obſcure *Principles, to wit.* This ſoft Fire *and* Coagulable Water, *only out of a deſire to propagate Truth; which in this Age is wofully kept under by the Haters of Hippocratical Learning; not that I think it poſſible for any Men wholly to exinguiſh it, In regard it is Powerful, Impregnable, and Triumphant above all things in the whole World, as Holy Writ alſo teſtifies; For* Zorobabel *ſays*, Wine is ſtrong, The King is ſtronger, Women ſtrongeſt, but above all things, Truth beareth away the Victory; all the Earth calleth upon Truth; The Heaven praiſeth it, it is always ſtrong, it conquereth and liveth for evermore, &c.

3 Eſdr. c. 3 *&* 4.

Obj. *I know many men according to the variety of their Diſpoſitions, will diverſly cenſure me, for publiſhing That which Nature hath decreed to manifeſt only to* Philoſophers; *and Thoſe too, tugging hard after it, by Labour and Study.*

Theor. c. 11. *For, ſays* Raimund, Nature, my Lady and Miſtreſs ap-

appeared to me, and with Tears in her Eyes, beſpake me thus; Alas! what ſhall I now do? endeavours are on foot to take away my Weapons and Inſtruments from me, and to plunder and diſcover my Secrets, *&c.* Whereupon I obliged my ſelf to hide her Inſtruments and to preſerve them from the hands of their enemies. *Theſe* Inſtruments *of Nature the profound* Lullye, *being ſo inſtructed by* Hippocrates, *keeps in the dark and points at them only in two Words, calling them* Entia Realia.

So alſo Baſilius Valentinus *hides Them under the barbarous terms of* Aſa, *and* Phalaia: *Tea, the ſame Mechanical Inſtruments of Nature, which* Hippocrates *calls Fire and Water, He elſewhere ſtyles,* Gladiatores: *And as* Hippocrates *did diſplay them only to a few Diſciples, after the manner of the* Pythagoreans, *under the operation of various Arts; ſo* Baſilius, *following his Maſter, chuſes to repreſent them under the notion of Brewing of Beer, and other Rural Labours.* A Clavi. 1. 2. See Cur. Triumph. Antim.

But Paracelſus *deſpiſing vulgar Alluſions, though condemned of Hereſie by the Church, yet agrees with* Hippocrates *in This moſt* Ancient Learning, *and holds forth the afore-ſaid* Inſtruments *of Nature under the names of diverſe* * Spirits. * *One Spirit draws, another thruſts out, both doth ſomething,* &c. Hipp. l. 1. De Dæm.

The reſt of the Ancient Philoſophers vailed the ſaid Architectonick Inſtruments under the fained compilation of Re-bis *(as if intimating two things) Hence the Rythme,*

Eſt *Re-bis* in dictis rectiſſima norma figuris,
From Rebis, *as two things,*
The right Rule ſprings.

Others have notified and repreſented Them under other diſguiſes, &c.

I anſwer, That I was not without the deep conſideration of theſe and many other things in my mind, yet (for a reaſon to be mentioned anon) I could by no means be diverted from my purpoſe; eſpecially being perſwaded, that therein I benefit the Common-Wealth, *to which all of us owe the greateſt part of our Fortunes: For in diſplaying theſe* Inſtruments *of Nature, I do likewiſe exhibit a ſure and certain Method, hitherto obſerved by few, excluſive of all Ambages and Fallacies; ſo that for the future, This moſt Ancient, Noble, and Neceſſary Art of* Chymiſtry *may for ever be vindicated from the Calumnies and Barkings of Illiterate and Flagitious Perſons, who are its rude and ignorant* Haters. *Anſ.*

For

I would impair no good Man's Credit hereby.

For what doth more frequently proceed from ſuch Giant-like mouths (not only againſt the afore-mentioned lights of the World, but alſo againſt Thoſe, who out of their zeal for Piety and Freedom, have endeavoured by their aſſiduous labour and meditation to conquer thoſe Difficulties and diſpel thoſe Obſcurities, which the Ancients (worthy to be had in perpetual remembrance) have propounded) than the names of Apoſtates, Mountebancks, Empiricks, *or* Experimentaliſts (*though this laſt Epithite they ſparingly give; as not willing to mention any thing of* experience) *Yea, they likewiſe threaten and crack amongſt unlearned ones (a juſt Wonderment that ſo great Arrogance can be ſpent on ſo ſmall a Subject) that they will ſhortly manifeſt to the World by their Pens, the Vanities of* Chymiſtry, *though they never yet knew what this Ancient* Dame *was, nor had ever the honour to ſalute her, ſo much as at the Threſhold. O how ſorely do they miſtake our Friend* Galen, *whoſe Followers, yet they profeſs themſelves to be. For he teaches,* That in every thing a Man muſt firſt be his Crafts-maſter, before he begins his Work. *Aſſuredly there is a great difference between the* Skill *of making Experiments, and an* habit *of uttering vain and empty words. Of ſuch* Heraclitus *ſaid of old.* It is not beſt to hide their ignorance; *but 'tis fit (as* Plutarch *ſpeaks) to diſcover it, and to endeavour to heal it.*

* In lib. Hip. de Aliment. Comment. 3. Text. Pharmacia.

Such Learned Men, who have not had their minds darkned by vain and prejudicate Opinions, have had far other thoughts of Chymiſtry: *For* Mathiolus *writes to* Andrew de Blau, That no man can be an ordinary, much leſs a compleat Phyſician, who is not well exerciſed and verſed in Chymiſtry. *But what need is there to allege the Teſtimonies of Learned Men in the caſe?* Nature *it ſelf fights for* Her, *which, without this* Art, *cannot produce ſo much as one grain of* Seed; *as ſhall be demonſtrated:* Hippocrates *was very well skilled in this Ancient Doctrine, as will eaſily appear; Yea, He commends it to all the true lovers of* Phyſick: *Nay, without this* Art *the enemies and oppoſers of* It *would live like Bruit-beaſts, not having an Houſe to defend themſelves againſt the injuries of the Weather; for they would want* Lime *and* Brick *for building: neither would there be* Glaſs *for Windows, nor* Looking-glaſſes, *or* Spectacles, *neceſſary helps*

Lib. 4. Epid.

for

for Old-Mens eyes. Yea from whence could the leaſt gain be expected? unleſs the melting of Minerals, and the ſeparating of Metals had been found out by Chymiſtry? *Were it not for* This Art, *Printing would fail, Nature of her ſelf would never bring forth* Linnen, *nor* Paper, nor *Ink to Write, or Print with; neither ſhould we have any* Colours, *of which this neceſſary and noble Art hath produced an infinite number; for* Cinnabar, Ultramarine, Blew, Minium, Ceruſſe, Purple, * Aurum Muſicum, *and the temperature of other Colours, are the products of* It: *Yea, who can enumerate all the Benefits ariſing from this* Art, *for the uſe of Mankind? The whole Northern Region, as well as my own Country, owe much to this Art; for hereby is made a Drink out of* Barley, *which is called* Ale, *or* Beer. *Now* Barley, *as* Galen *teacheth, if it be a little boiled, cauſeth Windineſs; if boiled to an higher degree, it occaſions Obſtructions. But our Anceſtors being inſtructed by* Hippocrates, *through the help of this* Art *have excited the inſtruments of Nature in* Barley *it ſelf, and have changed it into a new Seed, no longer called* Barley *but* Mault. *They boil this* Mault *after it is grinded, and again excite the inward Organs to Alteration, which action is called* Fermentation, a Fervendo. *After this manner, as* Hippocrates *inſtructs us, is this moſt wholeſome Drink made of It.*

* *An Artificial Gold uſed much in* Italy *by Painters.*

But what do I ſpeak of Beer? The Juice of Grapes, of it ſelf, would never be made Wine, *unleſs Art did concur to ſtir up the Organs in it to Operation. The like may be ſaid of* Bread, *which in the abſence of this* Art *could never be compleated, unleſs the inſtruments of Nature in the* Meal, *by a proportionate degree of Fire and Water be excited from without? For when* Theſe *begin to act upon one another, for want of new matter, the* Lump or Dough *firſt ſours, then by degrees it putrefies, and at laſt breeds Worms: But* Art *retards, or hinders the Operation of thoſe Inſtruments by vehement Heat or Cold; and ſo the Work is perfected, and* Bread *made, which is ſo neceſſary for the Suſtentation of Man's life.*

Wine.

Bread.

Neither do Aliments *alone ſtand in need of this* Art, *but alſo the moſt Wholeſome and Effectual* Medicines *cannot be made without it, as amongſt others, We may ſee in* Treacle; *for unleſs the infinite Inſtruments of Nature in the* Simples, *which make up that* Compoſitum, *be united by Fermentation, and ſo ſuffered to reſt, it would be altogether uſeleſs.*

* Lib. De Viribus Cordis. Tract. 2. c. 4.

For *Avicen *says, That*, That Medicine is of double Vertue which hath ſuffered Fermentation. *For which cauſe the Inventor thereof, being well skilled in Chymical Operations, adds* Wine, *that the Work may be more readily done. For all Natural things are transformed by* Fermentation, *as is plainly ſeen in the* Juice of Grapes, *in Brewing of* Beer, *and in Making of* Bread.

Obj. *But it is alleaged, though Reaſon and Truth it ſelf do evidence theſe things to be ſo; yet notwithſtanding the Novelties which you introduce into* Philoſophy *and* Phyſick, *and the Mineral and Metalline Remedies preſcribed by you, which are very contrary to Man's nature, and were unknown to Antiquity: Theſe are the things which we implead and oppoſe.*

Anſ. *I anſwer. It is an impoſſible thing to introduce* Novelties *into the World; but to perfect, alter, throughly to mix and compound things introduced already by the Creator, is very poſſible. This* Hippocrates *teacheth, and it is allowed to Art. So Flax or Hemp, by various alterations is made* Paper: Graſs *by the like Alterations is changed into a* Glove, *and alſo into* Glew. *The* Juice of Flowers *by a various Alteration is made* Honey; *and* Honey *in like ſort is changed into* Hydromel, (i. e.) *Mead or Methegline (a moſt pleaſant Drink in* Lituania, *nothing inferior to Spaniſh Wine) and at length it turns to* Vinegar, *which is afterwards eaſily reduced to Elementary* Water. Bread-corn *by Alteration is made* Hot-water. *Sundry* Simples *gathered together and mixt in one, by Fermentation become* Treacle. *So, ſince* Hippocrates *his time*, Caſſia, Sena, Mechoacan, Cremor Tartar, *and infinite other things are found out, which he made no mention of; which yet are not* new, *but only retrieved and brought forth into uſe again by long Study and Experience. So that we may boldly ſay with the Wiſe Man*, There is no new thing under the Sun. *Whatſoever therefore the Followers of* Hippocrates *have handed out, and as it were Mid-wifed into the World, the ſame* was *from the beginning, though our eyes were not ſo clear-ſighted, as to diſcover it. But* Stephen Paſquier *anſwers this Objection very Elegantly*,

There is nothing made which was not before, but things thoroughly mixed and ſevered, are altered. L. 1. De Diæt.

Eccl. c. 1. v. 10.

Dicitur eſſe novus, nobis Paracelſus, ob idq;
Crimen, in obſcurum pellitur exilium.
At novus *Hippocrates*, novus eſt *Chryſippus*, & ipſi
Romæ Aſclepiades, tempore quiſq; ſuo.
Qui nova damnatis, veteres damnetis oportet,
Aut iſta nihil eſt in novitate novi. Engliſhed

Englished thus,

Some Paracelse *of Novelty implead,*
For which Judg'd Crime he erst was banished.
So Hippocrates, Chrysippus, *and at* Rome
Asclepiade *too were* New, *They'd all one Doom.*
They who condemn new *things, condemn the* old,
Or else do both mis-judge, and are o'r bold.

As for Mineral *and* Metalline *Remedies, neither these were not newly introduced into* Physick, *but were in use among the Ancients. For* Treacle *that most ancient Compound, is altogether Ineffectual without* Chalcitis; Alkermes *takes into its composition* Lapis Lazuli, *and* Gold, *the perfectest and noblest of Metals. The same* Mesue *made Pills of the same stone of good use, in Melancholy and Madness; which latter* Practitioners *guild over with Gold or Silver.* Gold.

At Vilna, *the Metropolis of* Lituania; *I knew a Silver-Smith, a lusty Fellow, a Batchellor, unlearned, yet of so happy a memory, that in his own Mother Tongue, he could repeat almost word for word whatsoever he had once heard. This man from his youth to that very time, which was the 47th. year of his age, had accustomed himself daily to eat a little of the filings of Silver, as he was at work, and he firmly believed that the use thereof encreased his memory.* Silver.

Emeraulds, Rubies, Jacinths, *do they not enter into various compositions, which we call Cordial ones?* Gems.

Sulphur *is daily prescribed in the Diseases of the Lungs, and is praised by* Dioscorides *a very Ancient Writer.* Sulphur.

Iron *is commended by the Ancients in the Diseases of the Spleen, and we use it at this day with good success; Mineral Waters were in great veneration among the Ancients, and* we *also have recourse to them every year in desperate cases.* Iron.

But what will they say of Salt, *without which Man's Life cannot be sustained, and which we use every day in seasoning our Meat? Is that a new Invention? or had the Ancients no knowledge of it? yet it is excocted not only from the* Sea, *and from* Fountains, *but there are besides* Mountains *and* Mines *of native solid Salt, like Marble; out of which it is hewn, and grows again, like Stones in Quarries.* Salt.

I my self have seen such in Valachia, *and near* Cracovia,

a greater Revenue arising thence to the King, *than from any other thing; which yet cannot be called a* Vegetable, *nor an* Animal; *it must therefore needs be a* Mineral.

So for external Remedies, The Ancients never composed their Oyntments, Plaisters, Collyries, *and such like, without* Minerals *and* Metals.

Lead. *Of* Lead, *mix'd by Chymical Art, with Vinegar they made* Ceruse *for the Unguent and Plaister, which is called* White; *of* Lead *is made* Litarge, *of which is made the* Emplastrum Triapharmacum: *All these were found out by the Ancients.*

Copper. *Of* Copper *and* Vinegar *by the same Art is made* Verdigrease, *which enters into the composition of the* Egyptian Oyntment, *so called from its Swarthy colour, the invention also of the Ancients.*

* *

But why do I spend time in mentioning these things, there is not an Old-Woman in Italy, *but will inveigh against the opposers of this* Art? *for without* It, *it is impossible for them to find out ony thing to Colour and Dye their Hair.*

In a word, whatsoever Famous and Excellent thing is performed by Art, *it proceeds from the foundation of This Ancient* Philosophy; *though men know this well enough, yet they* L. 1. De Diæt. *are ashamed to speak it out. The Old-Man*, Hippocrates, *admiring at this stupidity and turning to his Followers, says (smilingly and with a low voice)* The Divine Mind hath instructed men to imitate her Works; they know what they do, but are ignorant of what they imitate. *They are* Hippocrates *his words. So that*, Hippocratical Chymists *do not endeavour to produce* new things, *but to recal from Oblivion, Things approved by the* Ancients.

It is further objected, That the strong Remedies of Quicksilver, *and* Antimony *do evince the ignorance of* Chymists; As if *Lapis Armen, Lazuli*, and Unguents of *Quick silver*, were pleasant. *The use of them being abominable, and taken at Mouth, they often endanger Life.*

As for the ignorance objected, I wonder not at it, for it is an Epidemical *Disease in all Professions, and especially in* Physick, *which of necessity takes it original from this* Ancient Art. *This made* * Hippocrates *to say, That* Physick was indeed the noblest of all Arts, but it was depretiated by * De Lege.

reason

reaſon of the ignorance of thoſe who practiſed it. *'Tis* ignorance *therefore which occaſions all the Miſchiefs in* Phyſick; *neither doth it raiſe greater envy any where, than amongſt thoſe who follow not the* Chymical way *of Practice, whoſe envy ſometimes appears in their looks: So that now a-days a* Phyſician *is ordinarily deſpiſed, and expoſed to the Scoffs and Taunts of Facetious Wits: Oh, where is the* Majeſty *wherewith* Phyſicians *did once ſhine amongſt themſelves? What's become of the eſteem and brotherly reſpect one towards another, which* * Hippocrates *ſo much commends? In our age one* Phyſician *undervalues another, carping at what he ſays or does; yea, he quarrels at, and oppoſes (behind his back) That which he underſtands not; extolling himſelf amongſt the ignorant Vulgar, for the ſordid hope of a little Gain. If ſuch perſons by the help of our* Furnaces, *had learned that the Principles of* Chymiſtry (i. e.) *The Inſtruments of Nature, according to* Hippocrates, *were the Foundations of Medicine,* Phyſick *had never been divided into ſo many Sects, as it is at this day. For now there is a Sect riſen which divides* Phyſick *into two parts,* Chymical *and* Galenical, *againſt the mind of Old* Hippocrates, *who never mentioned but* One, *neither did* Galen *take notice of any ſuch diviſion. The opinions of* Hippocrates *and* Galen *ſeem too prolix to theſe men; for they are contented with a few Rules, and though ignorant of the inſtruments of Medicine, yet do pride themſelves in being accounted and called the only* Canonical *Phyſicians by Old-Wives and Plebeians.* Galen, *who was addicted to no Sect, yet moſt accompliſhed for Learning and Prudence, calls ſuch men* Servi, *for* He *was willing to conſult with all ſorts of perſons; Fiſher-men, and men of the loweſt rank, with rude and unskilful Plebeians (why then doth* Sennertus *in his Book* De Conſenſu, *chap.* 4. *impute This as a fault to* Paracelſus) *not only that he might eſcape the cenſure of* Hippocrates *(who alſo was not aſhamed to ask queſtions of plain Country-men in the beginning of his Book of* Precepts) viz. *Ignorance, but alſo that he might be able to diſcern Truth from Falſhood: For that quick-ſighted perſon knew very well that nothing could happen more Calamitous to the Sick, than to lay credulity, preſumptions, opinion, and uncertainties, as ſo many Syrtes and Quick-ſands for the foundations of* Phyſick. *And though*

* De Decenti Ornatu.

in Galen's *time Natural Philoſophy, which now we call* Chymiſtry, *was confined within a few mens breaſts under an Oath of Secreſie, yet for the ſake thereof* He *travelled over all* Egypt, *where that* Art *moſt flouriſhed at that time; which ſhews the wonderful Curioſity and Diligence of the Man: for returning into his one Country, he diſtributed divers rare Medicines, which he there learned, among ſeveral Phyſicians, his Friends; That ſo they might be approved by their Experience. Thus he wrote of the wonderful efficacy of* Fire *and of* Treacle *to* Piſo, *a Piece moſt worthy to be read: And he highly extols* Æſchiros, *the Empirick, his Maſter, from whom he learned how to* burn Crabbs.

De Simp. Med. f. 18.

Wherefore Galen's *Praiſe remains entire, and He will always be accounted a moſt ſagacious Perſon; To whom, as well as to* Hippocrates, *a Reverence is due, as to the beginners and producers of many, if not all Good Things.*

So that Natural Philoſophy (now ſtyled Chymiſtry) *according to* Hippocrates, *is a moſt Ancient Science, being derived from the Greek words* Als, *ſignifying* Salt, *and* Cheo, *to Melt: Hence came the word* Alchymy, *as much as to ſay,* The Art of melting Salts. *And 'tis rightly called ſo. For Nature her ſelf can produce no fruit at all, unleſs the Internal Salts of the Seeds be diſſolved in the Earth (as I ſhall Ocularly demonſtrate:) And theſe once diſſolved, do again act upon one another, and ſo ariſe into a Plant for its peculiar uſes, and then they ceaſe from their labour; for as* Hippocrates *affirms,* One Spirit draws too, another thruſts from, both doing the ſame thing, and it inclines to either part (the Encreaſing and Vegetating) and ſo they imitate the nature of Man.

The Chymical Philoſopher, inſtructed by Hippocrates, *takes theſe Seeds thus brought by nature to Maturity, and in them conſiders thoſe Two* (Salts) *the Organs of Nature,* viz. *Fire and Water; and by Art, he urges them to action, by melting the Salts according to Natures Law, as* Alchymy *teaches, and then a new thing is produced, which was not before; for Example* Bread, *In This the* Hyppocratiſt *or* Chymiſt *again takes into conſideration, the Inſtruments of Nature; which he further aſſiſts by his helping-hand, melting the Salts; and imitateng Nature, he again brings forth a new Production, which*

we

we call Vinegar: *Now the* Chymiſt *obſerving that in this Vinegar the* Fire *doth exceed the* Water (*our Maſter teaching*, That no Sapor ſhould overcome by its proper faculty:) *He therefore conſumes the* Acid *part by its contrary, and again divides the* Fire *from the* Water, *and ſo a new Production called* Hot-water *is generated, which afterwards by the occult help of Art, is fixed into an* Alcaly; *and ſo the Curious* Hippocratiſt *goes on mixing and altering, till he obtains his intent: And at laſt he deſtroys both the Inſtruments or Faculties by repeated meltings of the Salts. And though hereby he may ſeem to ignorant Perſons to have produced ſome* New *things, yet there is no ſuch matter, for the things are moſt* Ancient, *only he melts and re-melts the Salts as often as the Laws of Nature will permit; which is not beyond the* fourth *Repetition, as* * *Learned Men with reaſon ſay. But of this enough at preſent.* Hippocrates *ſhews that this repeated Fuſion-melting, and Exaltation of Salts, honoured by the Ancients with the Title of* Alchymy, *hath place, not only in the* Vegetable, *but alſo in the* Mineral *Kingdome; for, ſays he,* Gold workers do beat Gold, waſh it, and melt it with a ſoft Fire, for it will not be made up with a ſtrong. *By which ſaying he diſcovers the ignorance and unskilfulneſs of Thoſe, who write that* Chymiſtry *is exerciſed about the ignoble fuſion of Metals and Minerals, as if theſe would be melted with a* ſoft *Fire; but the contrary is well known to ſuch who have overſeen either of them to be melted; for Gold requires not a gentle, but a very ſtrong Fire; Wherefore the Philoſopher doth not here underſtand this rude way of Operation, though he takes his beginning from it; which he preſently clears by a plain familiar example:* Man, *ſays he,* doth threſh, waſh, and grinde Bread-corn, and baking it, he uſes not a ſtrong Fire to make it up in a body, but a ſoft and gentle one.

Wherefore the Fire of the Chymical Philoſopher *in the extraction of Animals, Minerals, or Vegetables (called* Small Elixirs *by the* Modernes) *muſt be moderate.* Hippocrates *teaches,* All things to be like which were unlike. *But as ſoon as Fire exceeds the degree of being* moderate, *'tis no longer the* Philoſophers *fire, but* the Artiſts; *for then things are not* advanced *by the intervention thereof, but are* altered *thereby, as our* Maſter *teacheth in the fore-cited Book.*

Who-

*Dee, Holland, &c.

L. 1. De Diæt.

Galen *had no knowledge of Metals, or of Quick-ſilver.*

Whosoever therefore do apply themselves to the Fusion *or* Liquation *of Salts, either with a* gentle *or a* vehement *heat, They all have their dependance on this* Ancient Chymical Philosophy; *So that such persons are in a gross and ignorant Mistake in the judgement of* Hippocrates, *who exclude Apothecaries from this Art. For when* Pharmacopæans *do pound Vegetables, and wring out their Juice, then it is that they make a fusion of Salts, expelling and thrusting out the Exotick and Forrain, not being of one and the same temper (they are* Hippocrates *his words) but when they condense the melted Salts with Sugar into a Syrup, then they throughly mix and alter them*; So 'tis, *says* Hippocrates, with the nature of Man, all Arts communicating with humane Nature.

Wherefore if Nature *do precede* Art, *and* Art *doth but imitate* Nature, *there is no man under the Sun, who hath not within himself, as it were a Chymical and Salt-melting shop, only the* Canonical Physician, *who bears an hatred to the opinions of* Hippocrates, *by reason of his ignorance of this* Ancient Art, *excepts himself, as being altogether unacquainted with this divinely inspired* Science. *And by means of such* Ignoramus's, Physick *is accounted the meanest of all Professions, for it hath no foundation to build upon: Of such* Ignorants, Seneca *speaks,* That they are always learning, but never attain to the knowledge of the Truth.

Ars Glaucon. initio. *and* lib. 1. De Venæsect. adversus Er[illegible].

Hence it is that Galen *in his rich Writings approves and commends* Hippocrates *to us, as the Guide and Author of all Good, which* Epithites *he frequently bestows upon him; thereby eternizing and consecrating his Name to Posterity.*

This so well grounded opinion of Galen, *hath moved me, never, as long as I live, to admit of any other Doctrine in* Physick *but that of* Hippocrates, *which I believe will be Coævous with Nature it self.*

Otto

Otto Tachenius,

HIS

HIPPOCRATES CHYMICUS.

The Occaſion of writing the Enſuing Treatiſe.

CHAP. I.

A man knows only ſo much as is certainly diſcovered to him, by either Mental or Manual Operation and Experiment.

THe perfect knowledge of all Sciences is ſo difficult, that the Life of Man would ſooner be at an end, than he can attain unto the compleat underſtanding of any one of them, (ſo as to be put beyond all diſpute) by the help only of * Paper-books. *Socrates* having made a through diſquiſition into almoſt all Sciences, was then judged the wiſeſt of men by the Oracle; when he openly profeſſed, that he knew nothing at all: This the Preacher ſeems to confirm to us; *I beheld*, ſays he, *all the Works of God, that a man cannot find out the reaſon of the Works which are done under the Sun, and the more he labours to find it out, the further it is off; though a wiſe man think to know it, yet ſhall he not be able to find it out.* The Divine *Hippocrates* was not ignorant of this difficulty of obtaining knowledge in our Art of Phyſick, which made him ingeniouſly to confeſs it in his * Epiſtles to *Democritus: For*, ſays he, *though I am an old man, yet I am not arrived to the true knowledge of Phyſick*: And the ſame perſon avers, * *That our life is too ſhort for the acquiſt of any one*

* Which yet are not wholly to be rejected.

Eccl. Ch. 8. *v.* 17.

* In *Epiſt.*

* 1. *Aph.* 1.

one Science, from the very Foundation thereof. Hereupon he adviſes us, to honour and eſteem thoſe which have endeavoured *to ſearch out the hidden works of Wiſe Nature*; adding withal, that *no one of them could be juſtly blamed, though he were not able fully to find them out.* But it ſeems the Writer who reformed the *Auguſtane* or (*Auſpurgh*) Diſpenſatory, was of another mind; his Book was printed at *Tergow* by *William Vorhoven*, A. D. 1657. Upon occaſion of that Book, a few days ſince, my reſpected Friend, *John de Landa*, a Famous Bookſeller of this City, asked my advice, whether I thought it worth his labor to Print it here, *&c.* 'Tis true, I had heard of the Title before, but I had never ſeen the Book, for I had not ſo much leiſure as to ſpend my time in reading ſuch *Pieces*: Nevertheleſs, upon that occaſion, at ſpare hours I read it all over, and could not but take notice of, and wonder at that corrupt Cuſtom (ſo familiar to him and others, againſt the direct Precept of *Hippocrates*) that whatſoever a man had honeſtly found out by great Labour and Study, and had commended it to Poſterity in writing for the good of the Publick, the ſame ſhould preſently be traduced, defamed, and ſpurned at amongſt the Ignorant Vulgar, not by force of Reaſon and Experience, but by monſtrous Calumnies and Reproaches, that ſo (like *Heroſtratus*) they might procure ſome fame to themſelves, by the ruine of other mens Credit. The Reformer of the *Auſpurgh* Diſpenſatory treads in thoſe ſteps, railing and declaiming not only againſt the Ancients, but the Moderns alſo; Followers of *Hippocrates* and *Galen*, in ſuch ſort, that there is hardly an Arrow in the Quiver of Slander, which he ſhoots not at them. I had formerly inſtructed this Man in the way of making *Vipæine Salt*, but under a Metaphorical diſguize (for I had denied to teach him in plain terms) and now he proclaims me for a Cheat, and that *I hinder by Impoſture the making of it publick*: I ingeniouſly confeſs, that here, at leaſt in part, the Reformer ſpeaks truth; for whatſoever made Phyſicians who were lovers of Truth famous heretofore, the ſame things Impoſtors do craftily adulterate. Our *Hippocrates* was afraid

L. 1. de Diæt.

Pharmacop. f. 487.

fraid of ſuch Cheats, which made him conceal his Antipeſtilential Medicament, by which he had procured ſo much Honour to himſelf, and had happily and ſecurely cured that Diſeaſe; as his Epiſtles do teſtifie.

Paracelſus did alſo dread Impoſtors, who by his wonderful Art cured the (otherwiſe incurable) Contagions of the Body, as his Epitaph ſpeaks; which may be ſeen graven on a ſtone at *Saltsburge*, in the Hoſpital of *S. Sebaſtians.*

In our dayes *Lazarus Riverius* feared the like Cheats, and for that cauſe he publiſhed his *Specifique* againſt *Feavors* under a Metaphor. So *Helmont* very prudently vailed the Liquor which (with *Paracelſus*) he calls by a corrupt Name *Alcaheſt*; which yet is not free from Adulterators; but inſtead thereof the Reformer ſubſtitutes *Vinegar*; * hereupon, being inſtructed by my loſs, I became my own School-maſter, and have often thought upon that Saying of *Eſcheurenterus* to *Gratarolus*, *Thou knoweſt on eaſier terms the Sentence paſſed at* Bononia, *that he was proclaimed a Traytor to his Countrey, and worthy to be hanged, who firſt made a Filatory at* Trent *in* Germany; which is an Engine whereby Raw Silk by Spindles is artificially drawn into Threads.

* *In Append. f. 721*

So that I have hitherto concealed That which might ennoble a Phyſician, being jealous, not without cauſe, leſt by my ſluggiſhneſs and neglect, it might fall into the hands of Impoſtors, and thereby the worthy and the unworthy ſhould undergo the ſame Fate.

* *Pharmac.* 487.

But the earneſt importunity of this * Reformer hath cauſed me to ſelect ſome things out of the heap of my Obſervations and Experiments (which I had deſigned only for my own uſe) and now to make them publick; yet ſtill I keep to the Precept of † *Hermes*, *That the Wiſdom of the Author ought to be greater than his Book.* But I muſt follow the Clew of inevitable Fate; and I undertake this labour the more willingly, that I may diſcover the right way to thoſe that wander, and may bring back Straglers into it: As alſo, that thoſe who have hitherto oppoſed this Art, might at length correct their miſtakes, and begin to be wiſer: And further alſo,

† *Libro Radic.* None are worthy of the name of Teachers, but ſuch who teach by ſure Principles and cauſes. *Ariſt. in Proem. Metaph.*

that they who practiſe it, may aſſuredly underſtand that it is founded on the Principles of Nature; and ſo for the future may be delivered from the crafts and deceits of Sophiſters and Impoſtors. In this work, I mind more the Truth of the Cauſe, than the Ornaments of Elocution; for the ſpeech of Truth, ſays *Euripides*, is plain, neither matters it therein what ſtile we uſe, eſpecially ſince *Cicero* doth not require Eloquence in a Philoſopher, much leſs doth *Celſus* in a Phyſician: For as *Plato* ſaith, when we diſpute of *things*, the rudeneſs or the elegancy of *words* are not to be heeded, but only that ſatisfaction may be obtained, as to the Doctrine of the things themſelves; neither have I inſerted florid diſputings, or odious altercations, but whatſoever offers it ſelf more occultly to the Senſes, that, Experience being my guide, I have deſpoiled of its coverings, and have expoſed the truth of things naked to the eyes of all beholders, ſo that every individual man may know it; for Truth loves brevity, not diſputation. By this Compaſs I have Steered: Draw near therefore, all ye Lovers of Truth, and you ſhall behold things (both admirable and pleaſant) with your eyes, yea and handle them with your hands, which have hitherto ſtood remote from our ſenſation and knowledge. Now to the work it ſelf.

Three words are ſufficient in a juſt cauſe.

Qui nimium properat, ſerius abſolvit.
Or,
No more haſte, than good ſpeed.

CHAP. II.

* *Pharmac. f.* 481.

THe * Reformer begins with a lofty Brow: *Now*, ſays he, *let us come to the examination of the Salt of Treacle of the Ancients, whoſe preparation was ſo Childiſh and abſurd, that their ſimplicity did no where more appear than about it*, &c. And a little after, *Animals only have Volatile Salt, and in a violent Calcination, leave commonly nothing behind them, ſave only* Terra Mortua; *yea, the reſt*

of

of theſe abſurdities are not to be paſſed over in ſilence, in that they ſubſtituted Sal Armoniack *in the place of Common Salt, not at all, as I perceive, underſtanding the matter, becauſe all the* Sal Armoniack *is vaniſhed into Air, and ſo there remains nothing to them, neither of the Vipers, nor of their added Salt.* Thus he.

Do not raſhly condemn the guiltleſs, not having throughly weighed their cauſe.

But for my part I cannot ſee that the Ancients deſerve to be accuſed of abſurdity or ſimplicity in this thing, ſo as to incur the undue reprehenſion of the Reformer: ſo that before we judge, we are to hear, and that both ſides; and we ought to find out what the *Sal Armoniack* of the Ancients was, and for what reaſon they ſubſtituted it in the room of Common Salt? and for what end? and wherein their offence lay? ſo as to merit the raſh anger and bitter deſpight of this Reformer.

To make theſe things more plain, it is neceſſary that we dive into the ſecret nature of certain Salts, in order to the examination and underſtanding of them, and of the differences between them, by accidents proper to them, and known to Senſe, and that not by Logical and convertible Syllogiſmes, or imaginary Non-Entities, but by an Experimental and Natural Hiſtory: I ſay then, and am ready to prove, that not Animals only have Volatile Salt, but, againſt the Opinion of this Reformer, that all Vegetables alſo have not a grain of fixed Salt by Nature, unleſs they acquire it by Art. But firſt I will ſpeak of things more known, proceeding afterwards, by degrees, to thoſe which are more occult. *Pliny* witneſſeth, that Natural *Sal Armoniack* was in great uſe amongſt the Ancients; *It is found*, ſays he, *in* Africa, *in the Country of* Cirenia, *till you come to the Oracle of* Jupiter Hammon *in lumps, ſomewhat long, and under the Sands.* *Diaſcorides* confirms the ſame, that *Sal Armoniack* is praiſed from the Country where it is found. This Salt endures conſtant in the fire, being, after its manner, of a more Salt-acid reliſh, than our common Trencher-ſalt, as I ſhall ſhew; and therefore the Ancients found it more advantagious for Medicines, and for that cauſe have more commended it to us: But that which is brought to us is not in longiſh lumps, neither-

No imaginary things here.

L. 1. Ch. 7.

is

is it Natural, but is made by Art, *viz.* of the Natural, and of the Volatile Alcaly of Animals, as the resolution of it shews, according to the Axiom of * *Aristotle*, for it is divided into an Acid Spirit of Salt, and also into a volatile Alcaly (all salt things are divided into two substances, *viz.* Alcaly, and Acid, as I shall shew by degrees) both which being separated, and again reunited, become the *Sal Armoniack* which it was before. The Acid part or Spirit, hath all the properties of that which is distilled from Common Salt; but the Alcaly is of the same nature with that which is sublimated from Mans Urine, only 'tis not so stinking: Whence I conjecture, that they chose Camels Urine, not Mans, for the composition: For the Urine of Camels, as *Pliny* observes, is more profitable for Fullers, than the Urine of other Animals, from whence there must needs be a richer Alcaly; perhaps because they eat no Salt, as other Animals do, for common Salt doth not wash out, or cleanse; therefore Nansicca, *the Daughter of* Alcinous, *wash'd her Linnen in a Fountain on the Sea-shore*, as *Homer* records.

* All things nec. strictly consists of that into which they can be resolved.

L. 28. *c.* 8.

Odyss l. 6. from *vers.* 85. to 96.

But Artificial *Sal Armoniack* is made after the same manner as Sope; for Nature works alike in every thing, as * *Hippocrates* says, to wit, of the Acid part of *Sal Armoniack*, and the Alcaly of the Urine of Camels (or of other Animals, 'tis all one) I have made the like Salt from the Alcaly of Soot, and the Acid Spirit of Salt, (for want of other) for the Urine doth dissolve the Salt by Maceration; and the Alcaly of the Urine, which otherwise in a few days would vanish, here being delayed and stop'd, finds the Acid which it imbibes; and so of the Acid part of the Salt, and the Alcaly of the Urine, a new Artificial Creature is produced of a salt relish: But that which is not of the same nature, nor † accords with this new Salt, of its own accord is severed, and sinks to the bottom. The clear Salt liquor swimming at top they boil and scum, and again suffer the *Faces* to settle, and at last coagulate it into a Cake. This is the *Sal Armoniack* which is brought to us, but it is not that which the Ancients chose for Salt of Treacle, as the Reformer guesses; but

* *L.* 1. *de Diæt.*

Sal Armoniack.

† *Hip. l.* 1. *de Diæt.*

but that is the Natural which is found under the Sands (ἄμμος) as *Pliny* ſhews in the fore-cited place, of which I ſhall ſpeak more clearly in the Progreſs of this Work; but before I proceed, I muſt explain more fully what *Alcaly* is.

CHAP. III.

Sal Alcaly, *what it is.*

IT is not my purpoſe here to deduce the matter, *ab ovo*, as they ſay, or from the very Elements, but to manage a Demonſtration concerning things Phyſical, Natural, Material, and known by our Senſes. Know then, that *Salt-Kaly* is made of the Herb *Kaly*, coming in great quantity out of *Egypt*, which is there burnt whiles it is green, and ſo brought over to us, and is called by ſome *Soda*, and *Alumen Catinum*, but the right name is *Sal-kaly*. This Salt is not found in Natures three Kingdoms, unleſs it be produced by Art, through the help of Fire; whence it is that this *Virgin* is ſaid by the Ancients to have three Fathers, *viz.* Nature, Fire, and the Philoſopher.

I call the Senſes the Guides of Life, and of all its Operations

This *Sal-kaly*, as other Salts, is part of the *Compoſitum*, yet deprived of its ſeminal vertues, only it hath an abſterſive, Sope-like, and reſolving property; and by reaſon of this inanition, being as it were without form, it ſucks up and imbibes all ſorts of Acids, (the Ancients call it impregnation.) Hence it is that all Salts which do mortifie Acids are called by one general name, *Alcalies*, which are found not only in the vegetable, but alſo in the Animal and Mineral Kingdoms: And in theſe three, there are ſeveral ſorts of them, *viz.* fix'd, volatile, manifeſt, occult, and of a middle nature, taken from parts of Animals which are to be demonſtrated to the eye. But firſt I ſhall begin with that which is more known, which is found in a Flint, which conſidered, *quatenus*, a Flint, is thought by the unskilful to be under the Regiment only of one Rector; but the skilful Glaſs-

Alcaly is *inane* and empty.

Glaſs-men of *Murano* have obſerved, that though taken from its Native place, it weighs 100 *l.* yet it yearly acquires 10 *l.* or * thereabouts, to its weight. Hence the *Hippocratiſt* learns, that *Jovis omnia plena*, yea that it receives nouriſhment from the ambient Air, but as ſoon as the External and Artificial Fire ſupervenes, then the skilful Operator ſometimes converts it to Glaſs, and ſometimes to Calx or Lime: So that the *Hippocratical* and *Chymical* Philoſopher comprehends two different Faculties in a Flint (being ſo inſtructed by his † Maſter Fire and Water ſo called, for the two reaſons which conſtituted a Flint:) Theſe Faculties the Chymiſts alter by the help of a due Fire, which alteration is called *Incineration*, for of its own accord it turns to a Powder, whence it is called by a common name, *Calx* or *Lime*.

* *Coſmopolita* ſays, that the occult Food of Life is in the Aire.

† *L.* 1. *de Diæt.*

In this *Calx* or Calcinated Aſhes, the Chymiſt again comprehends the above-named Faculties, which for our better underſtanding, we will now once for all, * and at all times hereafter, call the *Acid* and the *Alcaly* from their effects.

* *Acid* and *Alcaly* the inſtruments of Nature.

Calx then, or Lime, hath two Salts, or (as *Hippocrates*) two Faculties in it ſelf, the *Acid*, and the *Alcaly*, both moſt conſtant in the fire, and one contrary to the other; and when the *Calx* is ſprinkled with water, then the Salts are diſſolved, and act upon one another. The *Alcaly* ſucks in, and acts upon the *Acid*, and this again aſſumes the *Alcaly*, not for the deſtruction of either, but for the Production and Generation of a new thing, and whatſoever they lay hold on in that Generation, not being too heterogeneous from their natures, is concreted with them into the hardneſs of ſtone; ſo one contrary is coagulated by another.

That the Fire is *Acid*, the Water *Alcaly*, I will ſhew in its place.

This knowledge of *Calx*, if the Reformer had learned out of *Hippocrates*, the Poor Man had never gone about the fixation of viperine *Alcaly* with *Calx*, as with a lamentable voice he declares in his Diſcourſe concerning Salt of Treacle. After the *Hippocratiſt* hath learned, that according to the Laws of Nature, *Calx* is petrified by contrary Faculties, then he reminds the Leſſon of his Maſter and Inſtructer, *viz.* that like is to be diſſolved

Pharmac. f. 485. Contraries are coagulated by contraries.

ved by like, and that not only in Artificials, but in Naturals, especially in Physick, and Humane Bodies, as will anon appear; *for Arts do imitate Humane Nature*: they are *Hippocrates* his words, who also teacheth, *That agreeable things adhere to one another.* *Hip. l. 1. de Diæt.*

CHAP. IV.

Alcaly *and* Oyl *are made Soap.*

Calx, or Lime, as I have said, hath two different Faculties, *Acid* and *Alcaly*: I have shewed before, that *Alcaly* hath at least a Soap-like and absterſive vertue, which *Hippocratists* have taught to extract and separate by its like: Therefore Soap-men add to the *Calx* a factitious *Alcaly*, burnt out of Vegetables in a triple proportion, because it mortifies the *Acid* part in the *Calx*, and melts the other part by its like; wherefore they moisten a little the Alcalized Ashes, with which they cover over the unslacked *Calx*, and so leave them, until the Lime or *Calx* falls asunder, as a sign of mutual action; then they mix them together, and pour on water, that the Mass may become moister (according to the Rule, *Salts act not unless they be dissolved*) then with a sufficient quantity of water they extract the Lixivious Fiery *Alcaly*; (I call it Fiery, because this boiling *Lixivium*, or Ley, consumed in a moment a Drunken Man with his Woollen Cloaths, so that nothing of him was found but his Linnen Shirt, and the hardest Bones, as I had the Relation from a Credible Person, Professor of that Trade) which Fiery *Lixivium* they call *Magistra*, which is glutted with so much *Alcaly*, that an Egg will not sink in it. Of the same mixture is made also another *Lixivium*, less saturated, which will not bear up an Egg; with this last Lye (for certain reasons) in boiling of Soap, they first mingle Oyl or Tallow, (which is contrary to *Alcaly*, as containing an occult *Acid*, as will appear by degrees) but they boil it with a soft fire till they wax white, then they add the *Magistra* in a triple pro-

Like things are dissolved by like. *Hip. de locis in homine.*

Of Lime and Honey is made a mixture good for the brawnineſs of the Feet.